

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

March 26, 2015

WELL WORK PERMIT

Rework-Secondary Recovery

This permit, API Well Number: 47-3304103, 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: R. Q. FLOWERS 3

Farm Name: MORRISON, ROBERT M.

API Well Number: 47-3304103

Permit Type: Rework-Secondary Recovery

Date Issued: 03/26/2015

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 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

5) WELL TYPE:



Liquid Injection /

1) Date:	01/14/20	15				
2) Opera	ator's Well N	lo.	RQ	Flowers 3		
3) API 1	Well No.:	47	-	033	-	04103
		State		County	7	Permit
4) UIC	Permit No.	UIC	R033	301AP		

Waste Disposal

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

Gas Injection (not storage) _____/

6) LOCA	TION: 1	Elevation	on: 1527'			Wa	itershed: Ter	nmile Creek			
	1	District	: Sardis			Co	unty Harrison		Quadran	gle Wolf S	Summit 7.5'
7) WELL	OPERAT	OR: H	G Energy,	LLC			8) DESIGNA	TED AGE	NT Diane W	/hite .	
	Addre	ss 52	260 Dupon	t Road				Addres	5260 Du	pont Road	
		Pa	arkersburg	WV 2610	1				Parkersh	ourg, WV 28	3101
9) OIL &	GAS INSI						10) DRILLIN	G CONTR			
Name	Sam War								ed Upon Appr	oval of Perr	nit
Address	P. O. Box	2327					Address				501
	Buckhann	on, WV	26201				÷				
Control of Production	POSED WI			Other p	hysical	ation change in v	well (specify)		rmation		Stimulate Convert
	LOGIC TA						Depth	2980	Feet (top)) to 2996	Feet (bottom)
							ting well): 29		Feet		-0
	oximate wa			Fre	esh 55	0	_ Feet	Salt _	1086	Feet	SD 1/26
15) Appro	oximate coa	al seam	depths:	595	Ē						1726
	al being min					No		_			
17) Virgin	n reservoir	pressur	e in targe	t formati	on 1250	psig	g Source	Estimated			
18) Estim	ated reserv	oir frac	ture pres	sure 2	650				19		psig (BHFP)
19) MAX	IMUM PR	OPOSI	ED INJEC	CTION O	PERAT	IONS: \	Jolume per hou	r 25 BBL		ole pressu	
20) DETA	AILED IDE	ENTIFI	CATION	OF MA	FERIAL	S TO BE I	NJECTED, INC	CLUDING		S Fresh	water, produced
water, b	bactericides a	and othe	er chemical	ls as need	ed to mai	ntain water o	quality and improv	ve oil recover	у.	12	
21) FILT	ERS (IF A)	VY) C	artridge filt	ters and/or	coal bed	filters					
							OTHER COR	ROSION C	ONTROL		
										3	
23) CASIN	NG AND TU	BING I	PROGRAM	M							
CASING	GOR	SPECIFICATIONS				FOOTAGE IN	TERVALS	CEMENT		PACKERS	
TUBING	_	Size	Grade	Weight per ft.	New	Used	For Drilling	Left In Well	FILL -UP OR SACKS (CU. FT.)		
Conductor										Kinds	
Fresh Wate		8 5/8"	LS	17#			710'	710'			
Coal	-	0 3/0		1711			7.0			Sizes	
Intermedia	nte -								1		
Production		4 1/2"	J-55	- 9.5#			3061'	3061'		Depths s	et
Tubing	1	4 112	0-00	0.011	_					13 0 0 11111	
Liners							1			Perforati	ions
Lillers										Top	Bottom
24) A DDT	LICANT'S	ODED	ATING P	IGHTS.	vere aco	nired from	R. Q. Flowe	rs			
			ease X			ontract	RECEIVE	Daylorgo	Λ		of record in the
by de		_ / 10	ease X		other co	Series C			Book 12	2/18	Page 187
Har	rrison			ounty CI	erk's of	nce in like	æof Oil ar	IU CAG	B00K _12	2-10	1 age _ ioi

FEB 0 3 2015

State of West Virginia Division of Environmental Protection Section of Oil and Gas

Well Operator's Report of Well Work

Farm name:	MORRISON,	ROBERT M.	Oper	ator Well	No.: R.Q.	Flowers #3	
LOCATION:	Elevation:	1,527.00	Quad	drangle:	WOLF SU	MMIT	
	District: Latitude: Longitude:	SARDIS 6,850 Feet south of 8,850 Feet west of	39	Deg 20 Deg 25	Min 0	Sec. Sec.	
Company:	PENNZOIL P. P.O. BOX 551 VIENNA, WV			Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Agent:	PHILIP S. ON	IDRUSEK		Size			
Inspector: Permit Issued: Well work Com Well work Com		8/16/95 9/28/95 1/22/96		8-5/8	709.55'	709.55'	200 SKS
Verbal plugging permission gran Rotary X Total Depth (fee Fresh water dep	ted on: Cable et) 313	Rig 1 M.D. NA	(*	4 1/2"	3060.6'	3060.6'	200 SKS
Salt water depth	representation of the state of	NA					
21 20 24 20 20 20 20 20 20 20 20 20 20 20 20 20	ined in area (Y/I	N) N N N 450 - 462					
Static Second Gas: Static Market Static Mote: ON BAINTERVALS, LOG WHICH	cing formation Initial open flor Final open flor Time of open rock pressure d producing form Initial open flor Final open flor Time of open rock pressure CK OF THIST FRACTURING	mation ow n flow between initial are mation ow n flow between initial are FORM, PUT THE FOLLO FOR STIMULATING, PHATIC DETAILED GEOLE	MCF/d MCF/d nd final sig (s MCF/d MCF/d MCF/d nd final sig (s WINC HYSIC OGICA	Final tests urface pre Oil: Initi Final tests urface pre G: 1) DET CAL CHAN	al open flow ssure) Pay zone of al open flow open flow ssure) AILS OF PUGE, ETC.	* Hour after Hour after Hour after ERFORATI 2) THE WE	* Hour Bbl/d Bbl/d Bbl/d TS Hour ED ELL
WILL	Department of mental Protect	nteredby the well tion For: PENNZ By: Date:	OIL P		S COMPAI	NY -	03/27/2015

Treatment:
Perforated Fifth Sand from 2,987' to 2,990' w/ 12 holes. Treated w/ 300 gals 15% HCl, 173 bbl gelled water, and 5,000 lbs 20/40 sand.

Direction of Bottomhole: Well was drilled 361' S 50° E

Well Log: Well was directionally drilled. All depths are measured depths relative to KB.

	KB	3131,	T.DDriller
	KB	3106	T.DLogger
3106	•	18667	Shale
.8667	-	.6 <i>L</i> 67	bnss dfli4
.6167	-	.96 <i>L</i> Z	Shale and sand
196LZ	-	.99LT	_Е опцр
19927	-	144T	Shale and sand
17472	-	.0697	Gordon
7990،	-	.6897	Shale and sand
56592	-	56451	Thirty Foot
5 97	-	15LSZ	Shale w/ sand streaks
<i>SLS7</i>	-	25631	Fifty Foot
72631	-	5136	Shale
2136	-	2040	Big Injun
2040	-	isl6I	Big Lime
<i>15L</i> 6I	-	. \$161	Shale
,\$16I	-	18881	Little Lime
18881	-	1627 ¹	Shale
<i>L</i> Z9I	-	12841	Sand
15841	-	13621	Shale w\ sand streaks
13681	-	12981	Sand w/ shale streaks
18621	-	1540,	Shale w\ sand streaks
15461	-	1200	Sand
1500,	-	1140	Shale
1140,	-	,9801	Sand
19801	-	127	Shale w\ sand streaks
127	-	1865	Sand
1865	-	660ء	Pittsburgh Coal
،06۶	-	460	Shale
۱ 09۲	•	300,	Sand
300	-	0	Sand and Shale

FORM WW-3 (A) 1/12



1) Date: January	14, 2015				
2) Operator's We	ll No.	RQ FI	lowers 3		
3) API Well No .:	47	-	033	-	04103
	State	:	County	-	Permit
4) UIC Permit No	. UIC2	R03301	IAP		

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,

	ner(S) To Be Served	7) (a) Coal	Operator			
(a) Name	Coastal Forest Resources Company	Name	Murray Coal			
Address	P. O. Box 709	Address				
o de abresolanto con	Buckhannon, WV 26201	•	St. Clairsville			
(b) Name	Allen Cochran		Owner(S) With D	eclaration Of Record		
Address	RR 5, Box 1010	Name	-			
	Salem, WV 26426	Address				
(c) Name		Name	-			
Address		Address				
radiess		·				
6) Inspector	Sam Ward	7) (c) Coal	Lessee with Decla	aration Of Record		
Address	P. O. Box 2327	Name	2			
	Buckhannon, WV 26201	Address				
Telephone	304-389-7583		_			
parties inv (2) The plat (s (3) The Const plan for er The date THE REASON APPLICATION THE APPLICA ACTION AT A Take notice tha Notice and App	수있다는 말았다면 하다면 하다면 이번에 하다면 발생하다면 하다 이번에 하는데 하다면 하는데 하는데 이번에 가장 하는데 아니는데 그렇게 하는데 아니는데 아니는데 아니는데 아니는데 아니는데 아니는데 아니는데 아니					
West Virginia Department of Environmental Protection, with respect to a well at the location described on the attached 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.						
	The person signing this docum	ent shall m	ake the following	g certification:		
"I aantie	nonelty of law that I have nonelly	inad and	Well Operator	HG Energy, LLC		
	penalty of law that I have personally exam h the information submitted in this docume		Address	5260 Dupont Road		
	I that, based on my inquiry of those individ			Parkersburg, WV 26101		
immediately res	sponsible for obtaining the information, I b	elieve that	By:	Diane White		
the information	is true, accurate and complete. I am aware	e that there	Its:	Agent		
are significant p	enalties for submitting false information,	meluding!				
the possibility of	of fine and imprisonment. Office of	Oil and	Signature:	Diane Whit	te	
	FFS 0 8 2015					

33041035W

U.S. Postal Service RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
CON TIME II ON II
Postage \$ 1.61
Return Receipt Fee 272 GIOC CHere
Destricted Delivery Fee
0 21.1
Street, Apt. No.; or PO Box No. RR 5. Box 1010
City, State, ZIP+4 Solem WV 26426
PS Form 3800, August 2006 See Reverse for Instructions
U.S. Postal Service TERMINIST RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided) For delivery information visit our website at www.usps.com
THE TOTAL OF SOLE
Postage \$ 1,40
Certified Fee 3.30 Return Receipt Fee (Endorsement Required) Restricted Delivery Fee
Hesticial Delivery Fee
Total Postage & Face \$ 7, 40
0-17-
Street, Apt. No.; Coastal Forest Resources or FO Box No. PO Box 709
City, State, ZIP+4 Buckhannon WV 26201
PS Form 3800, August 2006 See Reverse for Instructions
U.S. Postal Service CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com
Z OFFICE
Certified Fee 3.30 Return Receipt Fee (Endorsement Required) Z.70 Postmark Here
Restricted Delivery Fee (Endorsement Required) Total Postage & Fees \$ 7.40
NOT 5
Sent To Murray Coal Street, Apt. No.; or PO Box No. 46226 National Road
City, State, ZIP+4 St. Clairs ville DH 43950

PS Form 3800, August 2006

WW-9 Rev. 5/10

Page	187	of	
API Number 47 - 033	-	04103	
Operator's Well No. R. Q	. Flowers 3	3	

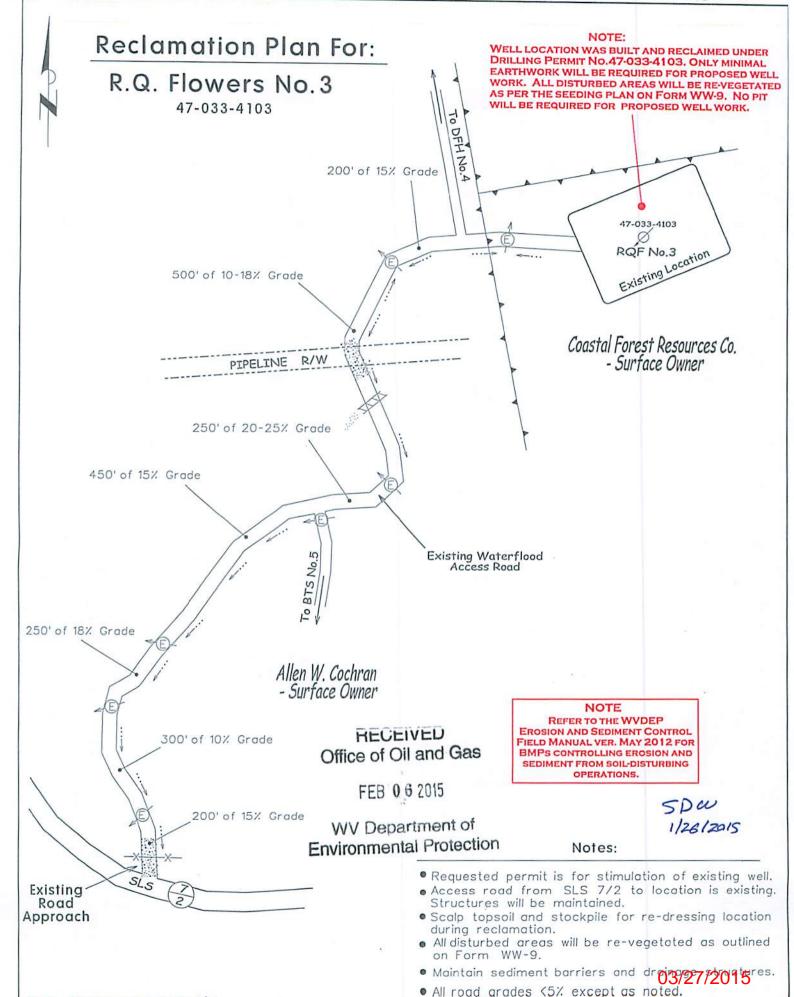
STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

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

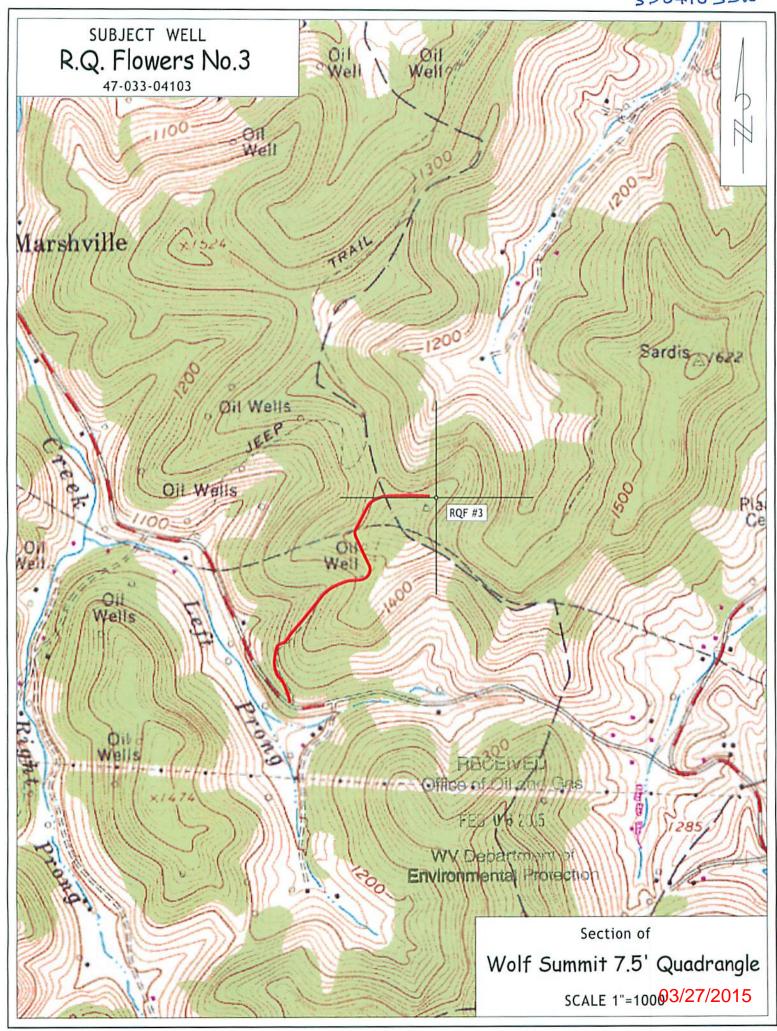
	RAL PERMIT FOR OIL A	AND GAS PIT WASTE D	DISCHARGE				
Operator Name HG Energy, LLC		OP Code 494497948					
Watershed Tenmile Creek		Quadrangle Wolf Sum	nmit 7.5'				
Elevation 1527'	County Harrison	Dis	strict Sardis				
Description of anticipated Pit Waste:	Fluids encountered while	stimulating subject well					
Do you anticipate using more than 5,	000 bbls of water to comple	ete the proposed well wor	k? Yes No	X			
Will a synthetic liner be used in the p	it? Yes	so, what mil.? 20 mil		1			
Proposed Disposal Method For Treat _x Land Appl Undergrou Reuse (at Off Site D	ed Pit Wastes:	Number		SDW 201			
Drilling medium anticipated for this value of the second o	nthetic, petroleum, etc. NA CCI re in pit, landfill, removed of dify what medium will be to	offsite, etc. Leave in pit used? Cement, lime, saw	dust Native soil, cement,	lime			
I certify that I understand are on August 1, 2005, by the Office of Oprovisions of the permit are enforced law or regulation can lead to enforced I certify under penalty of 1 application form and all attachmen obtaining the information, I believe penalties for submitting false information Company Official Signature	Dil and Gas of the West Viriable by law. Violations of ment action. aw that I have personally ts thereto and that, based that the information is trution, including the possibility.	ginia Department of Envi any term or condition of examined and am famili on my inquiry of those ue, accurate, and comple	ironmental Protection. If the general permit and it with the information is individuals immediate ite. I am aware that the int.	understand that the /or other applicable n submitted on this ely responsible for			
Company Official (Typed Name) Dia			FER	0 6 2015			
Company Official Title Agent		o go	WV De	partment of			
Subscribed and sworn before me this	14th day of Ja	nuary	, 2015				
My commission expires Oct . 4	n Dulo , 2016	ry	STATE OF S. DIAN P. C. Vienna, W.	FICIAL SEAL ARY PUBLIC F WEST VIRGINIA INE DULANEY D. Box 5519 est Virginia 26105 on Exima 19074/2001			

Operator's Well No. RQ Flowers 3

	LEGEND
Property Boundary	Diversion (1(11.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
Rond = = = = = = = = =	Spring ->
Existing Fence — X — X — X —	Wet Spot
Planned Fence///	Drain Pipe with size in inches (2
Stream	Waterway \iff \iff \iff
Open Ditch	Cross Drain 77/1/1/1/1/1/1/1/
Rock & See See	Artificial Filter Strip
North N	Pit: cut walls
Buildings	Pit: compacted fill walls
Water wells	Area for Land Application of Pit Waste
Drill site	
Proposed Revegetation Treatment: Acres Disturbed .4	Provegetation nH
	Prevegetation pH
Lime 2 Tons/acre or to correct to pH	0.5
Fertilizer (10-20-20 or equivalent)	/acre (500 lbs minimum)
Straw 2	
MulchTons/s	acre
See	d Mixtures
Area I	Area II
Seed Type lbs/acre	Seed Type lbs/acre
Tall Fescue 40	Tall Fescue 40
Ladino Clover 5	Ladino Clover 5
Proper sediment Control should be in pla	ace at all times.
Attach: Drawing(s) of road, location,pit and proposed area for land app	olication.
Photocopied section of involved 7.5' topographic sheet.	RECEIVED
	Office of Oil and Gas
Plan Approved by: SelDWard	FEB 0 6 2015
Comments:	WV Department of Environmental Protection
Title: OOG Inspector	Date: 1/26/2015
Field Reviewed? (Harrison Yes (Y) No



Note: Drawing not to Scale





HG Energy, LLC 5260 Dupont Road Parkersburg, WV 26101 (304) 420-1100 - Office (304) 863-3172 - Fax

CK \$ 390 1 650.00 33041035W

January 14, 2015

Mr. Jeff McLaughlin WVDEP Division of Oil & Gas 601 57th Street Charleston, West Virginia 25304

RE:

R. Q. Flowers No. 3

Sardis District, Harrison County

West Virginia

Dear Mr. McLaughlin:

Enclosed are Forms WW-3A, WW-3B, WW-9, WW-3(B1), mylar of plat, reclamation plan, topo map and copies of the certified mailing receipts for a permit to stimulate an injection well. Also enclosed is our check in the amount of \$650.00 to cover the associated permit fees.

Very truly yours,

Diane White

Diane C. White

Enclosures

cc: Coastal Forest Resources Company - Certified

Allen Cochran - Certified Murray Coal - Certified Sam Ward - Inspector

RECEIVED
Office of Oil and Gas

FEB 0 6 2015

WV Department of Environmental Protection 03/27/2015

See that the cost of the cost

FEU (5 2015

CORRECT HURSELF MAN