

#### 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: 47-3304882, 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: NATHAN GOFF 10

Farm Name: MYERS, ROXANNE ESTATE

API Well Number: 47-3304882

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. <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



1)	Date:	01/14/20	15				
2)	Operator	r's Well N	Vo.	Nat	han Goff 104		
3)	API We	ll No.:	47		033	-	04882
			State		County	T)	Permit
4)	UIC Per	mit No.	UIC2	R033	301AP		

# 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

<ul><li>5) WELL TYPE:</li><li>6) LOCATION:</li></ul>		id Injection: 1108		/		ction (not storag	ge)		Vaste Dis	posal
-,		t: Tenmi			•	ounty Harrison			1 111	10
7) WELL OPER		_				8) DESIGNA		Quadrai		f Summit 7.5'
		260 Dupor				o) DESIGNA		-		
710		arkersburg		11	-		Addre	_	upont Roa	
9) OIL & GAS II						10) DDII I D	IC CONTIN		burg, WV	26101
Name Sam		IC TO BI	SIVOTIF	ILD		10) DRILLIN Name To				et e
	Box 2327						Be Determin	ned Upon App	roval of Pe	ermit
-	annon, WV	26201				Address				
11) PROPOSED	WELL W	ORK	Drill		/ Drill	deeper	/ Rec	drill 🔲	1	Stimulate V
			Plug off	old form	nation	/ Perfo	rate new fo	ormation		Convert
			Other	physical	change in	well (specify)		_		
12) GEOLOGIC	TARGET	FORMA	TION F	ifth Sand		Depth	2638	Feet (top	) to 26	54 Feet (bottom)
13) Estimated De	epth of Con	mpleted V	Well, (or	actual d	epth of exis	ting well): 29	900	Feet		
<ol><li>14) Approximate</li></ol>	water stra	ta depths	: Fr	esh 2	00	Feet	Salt		Feet	SDW
<ol><li>Approximate</li></ol>			316			_	8			1/26/20
16) Is coal being	mined in t	the area?	Yes		No					1/2010
17) Virgin reserv	oir pressu	re in targe	et formati	on 125	0 psi	g Source	Estimated	i		
18) Estimated res	servoir frac	cture pres	sure 2	2650		8				psig (BHFP)
19) MAXIMUM	PROPOS	ED INJE	CTIONC	PERAT	TONS: V	Volume per hou	r 25 BBI	Bottom l	nole pres	
20) DETAILED	IDENTIFI	CATION	OF MA	TERIAI	S TO BE I	NIECTED INC	TIDING	ADDITIVE	C Froe	h water produced
water, bactericio	des and othe	er chemica	ls as need	led to ma	intain water	quality and improv	e nil recove	NDDIII VI	1103	i water, produced
21) FILTERS (IF	ANY) C	Cartridge fil	ters and/o	r coal be	filters	quanty and improv	C OII ICCOVE	ıy.		
22) SPECIFICAT	TIONS FO	R CATH	ODIC PE	OTEC	TION AND	OTHER CORE	OCIONIC	CONTROL		
,		10,111,	ODIOII	COTLO	HOIN AIND	OTHER COR	COSTON	UNIKUL		
23) CASING AND	TUBING I	PROGRAI	М							
CASING OR			ECIFICAT	IONE		FOOTA CE DE	TERMINA	C101 400 00		I make a section of
TUBING TYPE	Size	Grade	Weight	New	Used		FOOTAGE INTERVALS CEMENT For Drilling Left In FILL -UP			PACKERS
	0.00	Citado	per ft.	Titow	Uscu	For Dinning	Well	OR SACKS		
							Won	(CU. FT.)		
Conductor								(00.11)	Kinds	
Fresh Water	7"	LS	17#			386'	386'		Killus	
Coal						300	300	-	Sizes	
Intermediate	1								Sizes	
Production	4 1/2"	J-55	9.5#			2737'	2737'	-	Double	
Tubing	1	0 00	0.011			2/3/	2131	-	Depths	set
Liners				-					D. C	
				_				-	Perfora	
									Тор	Bottom
									- 34	
24) ADDITICANT	'C ODED	ATING D	ICITEC		. 10					
24) APPLICANT						Guy D. Goff e	et al			
by deed	/ 10	ease X		other co			11/21/192			of record in the
Harrison		С	ounty Cl	erk's off	ice in le	ase TIEC	Oil	Book 326	3	Page 274
						Office of	on and	Gas		

FEB 0 6 2015

API#

07/09/2007

47 33 4882 3304882Sω

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

Section of On and Gas							
		Well Operato	r's Repor	t of Well V	Work		(SOD)
Farm name:	MYERS, RO	XANNE - ESTATE	Oper	ator Well	No.: NAT	HAN GOFF 10	04
LOCATION:	Elevation:	1,108'	Quad	drangle:	WOLF SU	MMIT 7.5'	
	District: Latitude: Longitude:	TEN MILE 1,125 Feet south 8,925 Feet west		nty: HAF Deg 17 Deg 27		Sec. Sec.	
Company:	P.O. BOX 55	URCES, INC. 19 V 26105-5519		Casing/ tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Agent:	PHILIP S. ON	NDRUSEK					
Inspector: Permit Issued: Well work Com		07/09/07 01/10/08		, all			
Well work Com Verbal plugging		04/17/08					
permission gran Rotary X Total Depth (fee	nted on: Cable et)	Rig 2900' NA		7"	386'	386'	95 sks
Fresh water dep				4 1/2"	2737.4'	2737.4'	150 sks
Salt water depth	ıs (ft)	NA					
Is coal being mi Coal Depths (ft)		N) NA N			11 34 11		
OPEN FLOW I	DATA	* WATERFLOOD IN	NJECTOR				
Produc	ing formation	Fifth	Sand		Pay zone d	lepth (ft)	2638'-2654'
Gas:	Initial open fl				al open flov		* Bbl/d Bbl/d
	Final open flo	on flow between initia	MCF/d		l open flow	Hours	
Static 1	rock pressure			urface pres	ssure)	after	Hours
Second	d producing for	mation			Pay zone d		
Gas:	Initial open fl	A ACT TO A STATE OF THE ACT TO A STATE OF TH	MCF/d		al open flov		Bbl/d
	Final open flo	ow n flow between initia	MCF/d		d open flow	Hours	Bbl/d
Static 1	rock pressure			urface pres	ssure)	after	Hours
NOTE: ON BACK OF THIS FORM, PUT THE FOLLOWING: 1) DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2) THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.							
	EEO 0 # 2015			RCES, IN	90	1.1	
	FEB 0 6 2015	By: Date			lger 1	Color Cor	
WV	/ Departmen	t oî				100	
Enviro	nmental Pro	tection					03/27/2015

### <u>Treatment:</u> Treated perforations, 2639'-2653', w/ 500 gals 15% HCl.

Well Log:	0	292	Sand and Shale
	292	304	Sand and Snale Sand
	304	754	Sand Shale
	754	754 764	_
	764	826	Sand Shale
	826	848	Sand
	848	916	Sand Shale
	916	970	Sand
	970	1006	Sand Shale
	1006	1084	
	1084	1256	Sand Shale
	1256	1340	
	1340	1593	Sand Shale
	1593	1614	Sand
	1614	1617	Shale
	1617	1640	Sand
	1640	1670	Sand Shale
	1670	1750	
	1750	1804	Big Lime
	1804	2230	Big Injun
	2230		Shale
	2244	2244 2336	Sand
	2336	2336	Shale
	2346		Sand
	2378	2378	Shale
	2378 2428	2428	Sand
	2426	2436	Shale
	2430	2470	Sand
	2638	2638	Shale
	2654	2654	Fifth Sand
	2900	2900	Shale
	2300		TD ·

19 m

FORM WW-3 (A) 1/12



<ol><li>Date:</li></ol>	January 1	4, 2015				
2) Operato	r's Well	No.	Natha	n Goff 104		
3) API We	ll No.:	47	-	033	-	04882
		State		County	-	Permit
4) LHC Per	mit No	LUCAT	202204	AD		

## 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,

5) Surface Ow (a) Name Address	Chad W. Johnson  109 Platinum Drive  Bridgeport, WV 26330	7) (a) Coal Name Address	Operator			
(b) Name Address	Bridgeport, WV 20000	7) (b) Coal Name Address	Owner(S) With D	Declaration Of Record		
(c) Name Address		Name Address				
6) Inspector Address Telephone	Sam Ward P. O. Box 2327 Buckhannon, WV 26201 304-389-7583	7) (c) Coal Name Address	Wolf Run Mi 2708 Cranbe Morgantown	erry Square	/	
TO THE PERSONS NAMED ABOVE: You should have received this form and the following documents  (1) The Application For A Liquid Injection or Waste Disposal Well Work Permit on Form WW-3(B), which sets out the parties involved in the drilling or other work;  (2) The plat (surveyor's map) showing the well location on Form WW-6; and  (3) The Construction and Reclamation Plan on Form WW-9 (unless the well work is only to plug a well), which sets out the plan for erosion and sediment control and for reclamation for the site and access road.  The date proposed for the first injection or waste disposal is						
APPLICATION	N WHICH ARE SUMMARIZED IN THE ATION [(FORM WW-3(B)] DESIGNATE	"INSTRUC	TIONS" ON THE	E REVERSE SIDE OF	THE COPY OF	
Notice and Ap West Virginia Application an and Reclamation	at under Chapter 22-6 of the West Virginia plication and accompanying documents for Department of Environmental Protection depicted on the attached Form WW-6. On Plan have been mailed by registered or in certain circumstances) on or before the design of	or a Well Wo , with respect Copies of this certified mai	ork Permit with the ct to a well at the S Notice, the Apple or delivered by I	ne Chief of the Office of the location described of lication, the plat, and the hand to the person(s) na	f Oil and Gas, n the attached e Construction	
	The person signing this docum	nent shall ma				
am familiar wit attachments an	penalty of law that I have personally exame the the information submitted in this docume that, based on my inquiry of those individual	ent and all luals	Well Operator Address	HG Energy, LLC 5260 Dupont Road Parkersburg, WV 26101		
the information	sponsible for obtaining the information, I be is true, accurate and complete. I am awar penalties for submitting false information of fine and imprisonment. Office of O	that there	By: Its: AS Signature:	Diane White Agent	te	
		in the second	0			

FEB 0,6 2015

WV Department of Environmental Protection

5262	(Domestic Mail (	D MAIL, RE	Coverage Provided)
4074	O F F	S 1.41	USE
10 0000	Certified Fee Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required)	3.30	Se Rostmark Here
4 0570	Total Postage & Fees	\$7.61	NG 104
	Street, Apt. No.; or PO Box No. Oh.	ad W Johnson 9 Platinum Tidge port 1	Drive

5279	(Domestic Mail C	D MAILTM R	ECEIPT ce Coverage Provided) site at www.usps.coms	
4074	O F F	5 1.40	LUSE	
0270 0000	Certified Fee Return Receipt Fee (Endorsement Required) Restricted Delivery Fee (Endorsement Required)	330	PARKE Postmark Ploro	
	Total Postage & Fees	\$ 7.40	NG 104	
107	Street, Apt. No.; or PO Box No. 270 City, State, ZIP44	or gantown	erry Square WV 26505	
	2000, August 20	06	See Reverse for Instructions	

RECEIVED Office of Officing Gas

FEB 0 6 2015

WV Department of Environmental Protection WW-9 Rev. 5/10

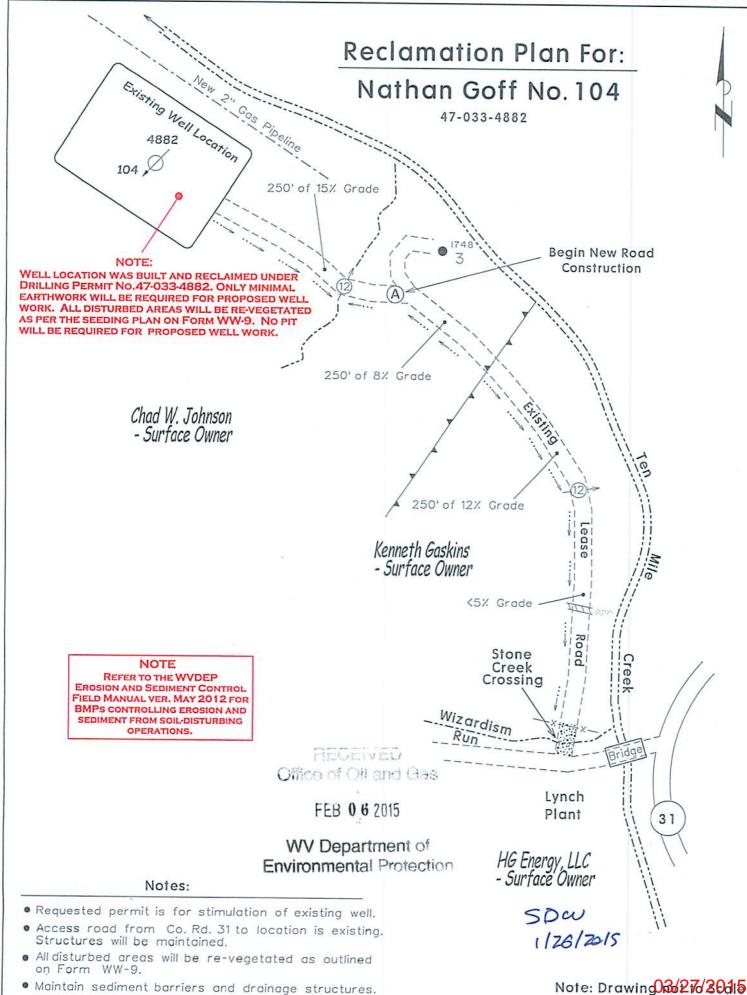
Pa	age	274	of	
API Number 47 - 03	33	-	04882	
Operator's Well No.	Natha	n Goff 104		

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

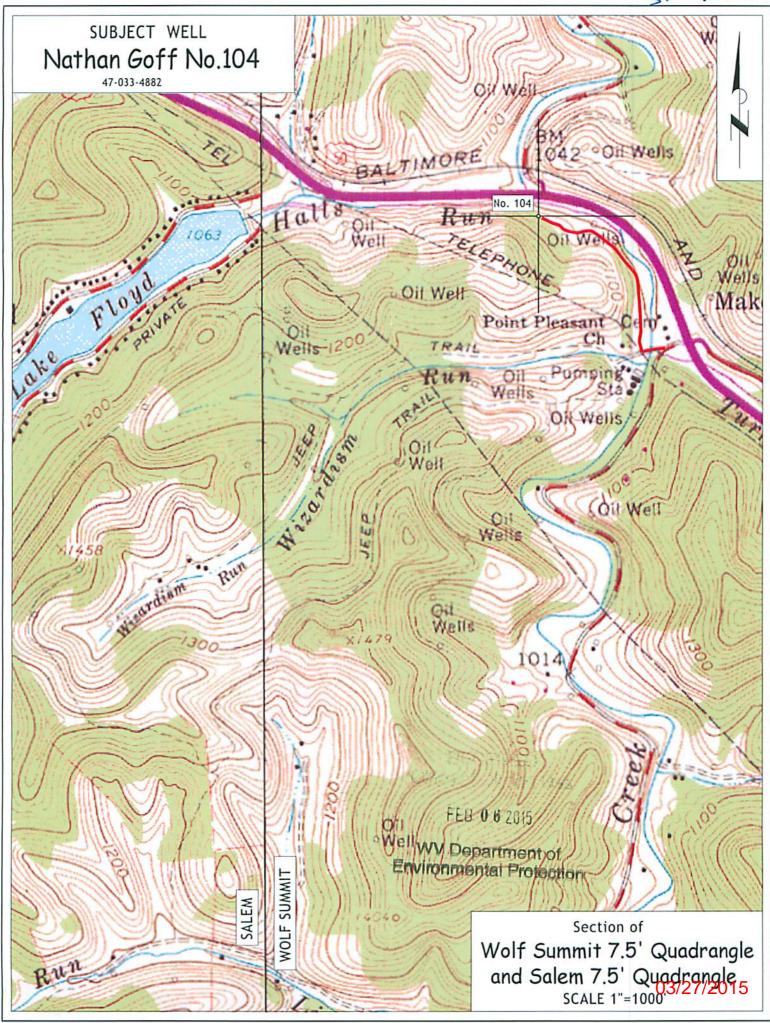
CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name HG Energy, LLC		OP Code 494497948	
Watershed Tenmile Creek		uadrangle Wolf Summit 7.5'	
Elevation 1108'	County Harrison	District Tenmile	
Description of anticipated Pit Waste:	Fluids encountered while stimul	ating subject well	
		e proposed well work? Yes No X	
Will a synthetic liner be used in the p		vhat mil.? 20 mil	
Proposed Disposal Method For Treat  Land App  Undergrou	lication und Injection ( UIC Permit Num)	ber)	#3
Reuse (at	API Number	)	
OH She D	isposal (Supply form WW-9 for	disposal location)	DW 12015
Drilling medium anticipated for this	well? Air, freshwater, oil based, nthetic, petroleum, etc. NA	etc. Air, Fresh Water	12612
Will closed loop system be used ? No			
Drill cuttings disposal method? Leav		, etc. Leave in pit	
-If left in pit and plan to soli	dify what medium will be used?	Cement, lime, sawdust Native soil, cement, lime	
provisions of the permit are enforced law or regulation can lead to enforcer  I certify under penalty of la application form and all attachment	on and Gas of the West Virginia able by law. Violations of any transfer action.  aw that I have personally examples thereto and that, based on a that the information is true, as	ons of the GENERAL WATER POLLUTION PERMIT issued Department of Environmental Protection. I understand that the erm or condition of the general permit and/or other applicable ined and am familiar with the information submitted on this my inquiry of those individuals immediately responsible for courate, and complete. I am aware that there are significant fine or imprisonment.	
Company Official Signature	ione White	RECEIVED	
Company Official (Typed Name) Dia	ne White	Office of Oil and Gas	
Company Official Title Agent		FEB <b>0 6</b> 2015	
		WV Department of	211
Subscribed and sworn before me this	14th day of _January	, <u>Environmental</u> Protection	
	Isan Jaco	OFFICIAL SEAL NOTARY PUBLIC	7
My commission expires OCA.	4, 2016	STATE OF WEST VIRGINIA S. DIANNE DULANEY P. O. Box 5519 Vienna, West Virginia 26105 My Commission Expires 26105	

	LEGEND	
Property Boundary	Diversion Leveler	: (11/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1
Road = = = = = = = =		
Existing Fence — X — X — X	Wet Spot	
Planned Fence///	Drain Pipe with size is	n inches
Stream	Waterway -	$\Leftrightarrow \Leftrightarrow \Leftrightarrow \Leftrightarrow$
Open Ditch	Cross Drain	
Rock 835886	Artificial Filter Strip	X X X X X X X X X X X X X X X X X X X
North N	Pit: cut walls	
Buildings	Pit: compacted fill wa	lls Willis
Water wells W	Area for Land Applica	ation of Pit Waste
Drill site		
Proposed Revegetation Treatment: Acres Distu	rbed Prevege	etation pH
	o correct to pH 6.5	Sauton pri
	EOO	
Fertilizer (10-20-20 or equivalent)	lbs/acre (500 lbs minimum)	
Mulch_Straw	Tons/acre	
	Seed Mixtures	
Area I		Area II
Seed Type lbs/acre	Seed Typ	e lbs/acre
Tall Fescue 40	Tall Fescue	40
Ladino Clover 5	Ladino Clover	5
Proper sediment control should	be in place at all times.	
Attach: Drawing(s) of road, location,pit and proposed ar	ea for land application	
Photocopied section of involved 7.5' topographic	sheet.	
		HEUEIVED
Plan Approved by:	1. 7.12	Unice of Ull and Gas
Than Approved by.	Janace	FEB <b>0 6</b> 2015
Comments:		1 25 0 2013
		WV Department of
200		Environmental Protection
Title: OG Inspector	Date: 1/26/2015	
Field Reviewed? ( Harrison ) Yes	( <b>V</b> )No	

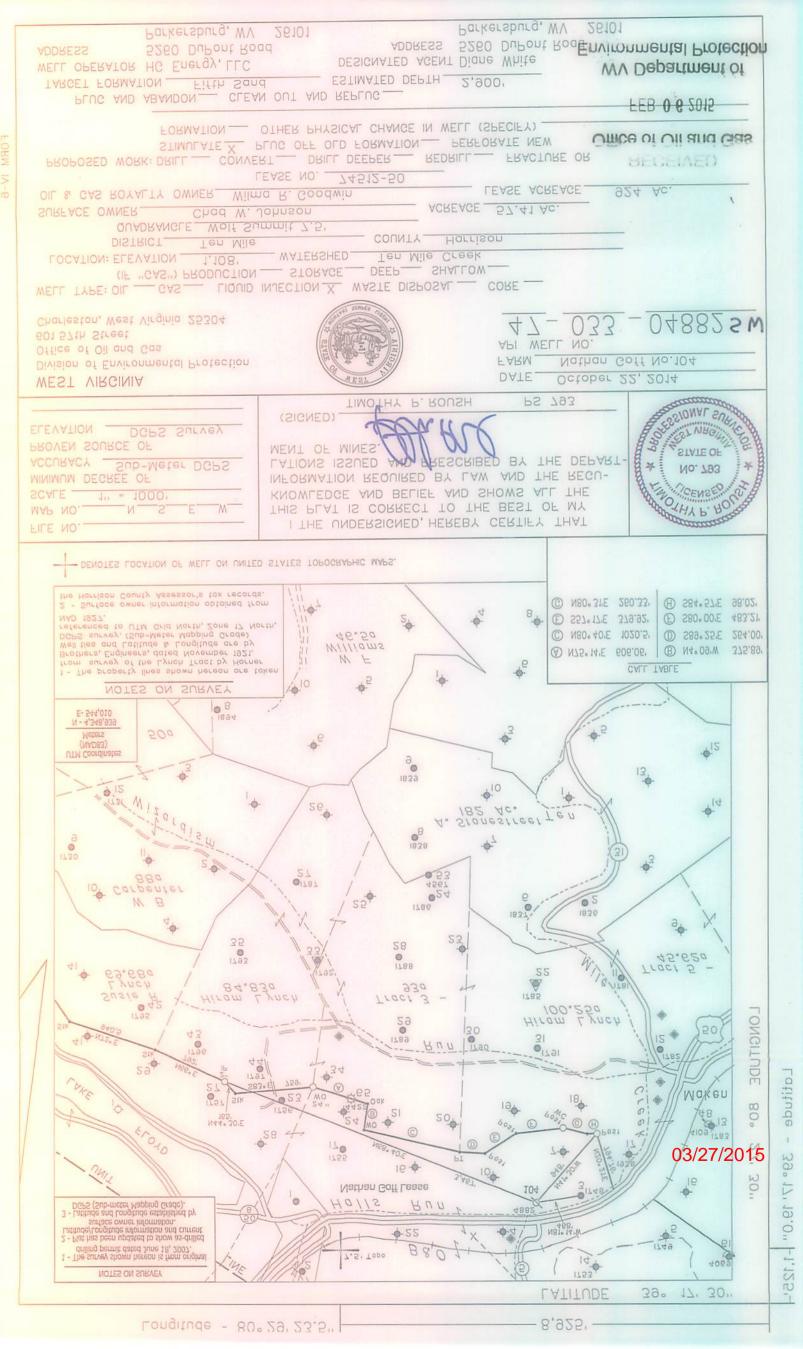


33048825W



Latitude - 39° 17' 19.0" | 1,125'-

FORM IV-6





HG Energy, LLC 5260 Dupont Road Parkersburg, WV 26101 (304) 420-1100 - Office (304) 863-3172 - Fax CK# 2903 650.00 3304<del>80</del>25w

January 14, 2015

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

RE:

Nathan Goff No. 104 (API 47-033-04882)

Tenmile 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 C White

Diane C. White

Enclosures

cc:

Chad W. Johnson - Certified

Wolf Run Mining Company - Certified

Sam Ward - Inspector

PECHIVED Office of Marie Bas

FEB 0 6 2015

WV Department of Environmental Protection