

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

July 14, 2015

WELL WORK PERMIT

Secondary Recovery Well

This permit, API Well Number: 47-4303503, 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

Schief

Operator's Well No: NATHANIEL MASON 144

Farm Name: BRUMFIELD, JOSHUA D.

API Well Number: 47-4303503

Permit Type: Secondary Recovery Well

Date Issued: 07/14/2015

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. 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.
- 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 	05/05/20 r's Well N		Nati	naniel Mason	144		
3) API We		47	-	Lincoln	-	s	
		State		County	_		Permit
4) UIC Per	mit No.	UIC	R043	B01AP			

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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FORM WW-3 (A) 1/12



1) Date:	May 5, 2	015				
2) Operat	or's Well	No.	Nathaniel Mason 144			
3) API W	ell No.:	47	-		-	
		State		County		Permit
A) IIIC Pa	rmit No	Lucat	201201	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	ner(S) To Be Served	7) (a) Coal	Operator	
(a) Name	Thermon Caudill	Name	NA	
Address	4946 Straight Fork Road	Address		
	Yawkey, WV 25573		_	
(b) Name	Joshua Brumfield		Owner(S) With D	Declaration Of Record
Address	31 Vandalia Drive	Name	NA	
	Yawkey, WV 25573	Address		
(c) Name		Name	-	
Address		Address		
6) Inspector	Ralph Triplett	7) (c) Coal	Lessee with Decla	aration Of Record
Address	5539 McClellan Hwy	Name	NA NA	
Address	Branchland, WV 25506	Address	-	
Telephone	304-389-0350	radicus		
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WW-2B1 (5-12) Well No. Nathaniel Mason 144

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 Labs
Sampling Contractor Sturm Environmental Labs

Well Operator HG Energy, LLC
Address 5260 Dupont Road

Parkersburg, WV 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.

Office of Oll and Gas

- See Attached Sheet -

MAY 1 9 2015

WV Department of Environmental Protection WW-2B1 Well No. Nathaniel Mason 144

Page 2 - Continued

West Virginia Department of Environmental Protection Office of Oil and Gas

NOTICE TO SURFACE OWNERS

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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:

- * Anna Skeens 4948 Straight Fork Road Yawkey, WV 25573
- Nathaniel Cassle
 19 Bear Fork Road
 Yawkey, WV 25573
- Therman Caudill
 4946 Straight Fork Road
 Yawkey, WV 25573
- * Ralph Tudor
 204 Jarvis Ridge Road
 Griffithsville, WV 25521
- * Jackie Stowers 4818 Midway Road Yawkey, WV 25573
- * Lorena Dunlap
 P. O. Box 227
 Griffithsville, WV 25521
- United Methodist Church Griffithsville, WV 25521

- * Ralph Tudor
 204 Jarvis Ridge
 Griffithsville, WV 25521
- * Sarah Fletcher 1940 Allens Fork Road Charleston, WV 25320
- Franklin Kilburn
 4933 Straight Fork Road
 Yawkey, WV 25573
- * Timothy Antill
 4925 Straight Fork Road
 Yawkey, WV 25573
- * David Pauley
 P. O. Box 198
 Griffithsville, WV 25521
- Deanna Miller
 4975 Straight Fork Road
 Griffithsville, WV 25521
- * Elba Bell
 P. O. Box 257
 Griffithsville, WV 25521

- Joshua Brumfield
 31 Vandalia Drive
 Yawkey, WV 25573
- * David Brumfield 5000 Straight Fork Road Griffithsville, WV 25521

RECEIVED
Office of Oil and Gas

MAY 1 9 2015

WV Department of Environmental Protection

07/17/2015

WW-9 Rev. 5/10

Page	123 of
API Number 47 -	
Operator's Well No. Nath.	aniel Mason 144

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM

	.C	OP Code 4944979	48
Watershed Straight Fork	Qu	adrangle Griffithsville 7.5'	
Elevation 795'	CountyLincoln	District Duval	
Description of anticipated Pit V	Vaste: Fluids accumlated while drilling t	the subject well	
Do you anticipate using more th	han 5,000 bbls of water to complete the	e proposed well work? Yes	No_X
Will a synthetic liner be used in	the pit? Yes If so, w	vhat mil.? 20 Mil	
Und Reus Off:	d Application erground Injection (UIC Permit Numb	disposal location))
-If oil based, what type		etc, Air, Fresh Water	
Additives to be used? Water, S Will closed loop system be use			
-If left in pit and plan	Leave in pit, landfill, removed offsite to solidify what medium will be used? me/permit number?	Cement, lime, sawdust Native so	oil, cement and lime
Consession of the Consession	tand and agree to the terms and conditi	ions of the GENERAL WATER	POLLUTION PERMIT is
on August 1, 2005, by the Offic provisions of the permit are er law or regulation can lead to er I certify under penalt application form and all atta- obtaining the information, I be penalties for submitting false in	ce of Oil and Gas of the West Virginia inforceable by law. Violations of any tenforcement action ty of law that I have personally example chiments thereto and that, based on the believe that the information is true, as information, including the possibility of	term or condition of the general mined and am familiar with the my inquiry of those individuals accurate, and complete. I am as	permit and/or other applic information submitted on immediately responsible
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Operator's Well No. Nathaniel Mason 142

	LEGEND	
Property Boundary Road = = = = = = = = = = = = = = = = = = =	Diversion Spring Wet Spot Drain Pipe with size in inches Waterway Cross Drain Artificial Filter Strip Pit: cut walls Pit: compacted fill walls Area for Land Application of P	
Lime Tons/acre or to correct to p Fertilizer (10-20-20 or equivalent) 1		H
	eed Mixtures	
Seed Type Ibs/acre Tall Fescue 40 Ladino Clover 5	Seed Type Tall Fescue Ladino Clover	ea II lbs/acre 40 5 5
Sediment Control should be in place a	at all times	
Attach: Drawing(s) of road, location,pit and proposed area for land a Photocopied section of involved 7.5' topographic sheet. Plan Approved by: Rapple D. Truptoll	application.	DEIVED Oil and Gas
•		<u> 1 9 2015 </u>
Comments:	MAY	-1 2 €013
Title: Distruct Inspector)	WV De	epartment of ental Protection
Lincoln Yes () No ' (

Reclamation Plan For:

Nathaniel Mason No. 142 Nathaniel Mason No. 144 Nathaniel Mason No. 224

NOTE

REFER TO THE WVDEP **EROSION AND SEDIMENT CONTROL**

FIELD MANUAL VER. MAY 2012 FOR

BMPs CONTROLLING EROSION AND SEDIMENT FROM SOIL-DISTURBING

OPERATIONS.

Alternate Pit Location Size ~80'x175' (0.3 Ac.) Nathaniel Mason Lease Joshua Brumfield Pit Size - Surface ~100'x15'x15' 1420 Drill 2240 Pit 144 1 Access 50' of 5-8% Grade **Existing Road** Reset Gate Main To NM #225 et al. 0.1 Mi. to WV SR 3. See Page 2 for Waterflood Road Detail Notes: REQUESTED PERMIT IS FOR DRILLING OF NEW WELL. SOME ACCESS ROADS ARE EXISTING AND WILL BE UPGRADED TO WVDELS TO TAKE THE STRUCTURES WILL BE INSTALLED AS SHOWN AND GAS STOCKPILE TO ST

DURING RECLAMATION

AS-BUILT CONSIDERATIONS.

e DRAWING NOT TO SCALE.

ON FORM WW-9.

ALL DISTURBED ARE MANILE DE THE SEGETATED AS OUTLINED

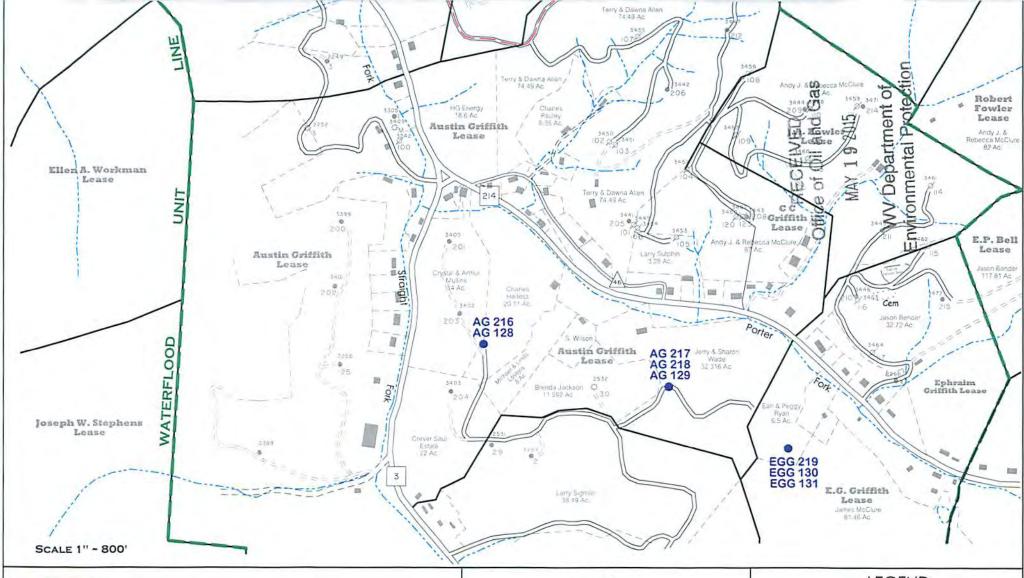
MAINTAIN SEDINENTEDERHAMENKONAGE STRUCTURES.

STACK BRUSH BELOW DISTURBED AREAS FOR SEDIMENT OF SCONTRO

ALL ROAD GRADES 55% EXCEPT AS NOTED ON

LOCATION OF DRILL PIT MAY BE CHANGED BASED ON

Page 1





MARCH 3, 2015

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.

LOCATION FOR PROPOSED WELLS

AG 216

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

PAGE 2

