

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

Tuesday, May 7, 2019 WELL WORK PERMIT Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC 5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for 1208 N-3H

47-033-05952-00-00

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: 1208 N-3H

Farm Name: LINDA & WILLIAM W. BROD

U.S. WELL NUMBER: 47-033-05952-00-00

Horizontal 6A New Drill Date Issued: 5/7/2019

Promoting a healthy environment.

API Number: 33-05952 05/10/2019

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) 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. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
- 2. 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 § 22-6A-5a (12), 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 one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- 3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
- 4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
- 5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
- 6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
- 7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
- 8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
- 9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
- 10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

API Number: 33-05952 05/10/2019

PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, 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.

WW-6B (04/15) API NO. 47-7033005/10/2019
OPERATOR WELL NO. Nutter 1208 N-3H
Well Pad Name: Nutter 1208

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL WORK PERMIT APPLICATION

1) Well Opera	tor: HG En	ergy II Appa	alachia, L	494519932	Harrison	Union	West Milford 7.5'
., ,, e., epa.				Operator ID	County	District	Quadrangle
2) Operator's	Well Numbe	r: Nutter 120	08 N-3H	Well F	ad Name: Nut	ter 1208	
3) Farm Name	/Surface Ow	ner: Nutter		Public R	oad Access: S	R 19	
4) Elevation, c	current groun	d: 1162'	EI	evation, propose	ed post-construc	ction: 1149	L
5) Well Type	(a) Gas Other	Х	_ Oil	Ur	nderground Stor	rage	
	(b)If Gas	Shallow Horizontal	x	Deep	-		5Dew
6) Existing Pa	d: Yes or No	No			4000		1/28/2019
				ipated Thickness nticipated pressur		Pressure(s):	
8) Proposed T	otal Vertical	Depth: 705	0'				
9) Formation a	at Total Verti	ical Depth:	Marcellus	3			
10) Proposed	Total Measur	red Depth:	19,082'				
11) Proposed I	Horizontal L	eg Length:	11,596'				
12) Approxim	ate Fresh Wa	nter Strata De	pths:	135', 500'			
13) Method to 14) Approxim			-	Nearest offset v	vell data		
15) Approxim	ate Coal Sear	m Depths: 8	10' to 81	5'			
16) Approxim	ate Depth to	Possible Voi	d (coal m	ine, karst, other)	: None		
17) Does Prop directly overly				ms Yes	N	1º X	RECEIVED Office of Oil and Gas
(a) If Yes, pr	ovide Mine	Info: Name	:				FEB 2 2 2019
		Depth					WV Department of
		Seam					Environmental Protection
		Owne	r:				

WW-6B (04/15) API NO. 47- 33 - 05952

OPERATOR WELL NO. Nutter 1208 N-3H

Well Pad Name: Nutter 1208

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	New	LS	157.5	120'	120'	Drilled In
Fresh Water	20"	NEW	J-55	94	650'	650'	CTS
Coal/Storage	13 3/8"	NEW	J-55	68	1890'	1890'	CTS
Intermediate	9 5/8"	NEW	J-55	40	2700'	2700'	CTS
Production	5 1/2"	NEW	P-110	23	19,082'	19082'	CTS
Tubing							
Liners							

SDW

Anticipated Cement TYPE Wall Wellbore Burst Pressure Cement Yield Max. Internal Thickness Size (in) Diameter (in) (psi) Type Pressure (psi) (cu. ft./k) (in) Conductor 30" Drilled In 30" .500 Fresh Water 20" 26" 2110 1200 Type 1, Class A 40 % excess yield = 1.20, CTS .438 Coal/Storage 13 3/8" 17 1/2" .480 3450 Type 1/Class A Intermediate 9 5/8" 12 1/4" .395 3950 Type 1/Class A Lead 40% excess, Tat 0% Ex Production 12000 5 1/2" 8 1/2" .415 14520 Type 1/ClassA 20% excess yield * 1.19, toll yield 1 Tubing Liners

PACKERS

Kind:		
Sizes:		
Depths Set:		

OPERATOR WELL NO. Nutter 1208 N-3H

Well Pad Name: Nutter 1208

19) Describe proposed well work, including the drilling and plugging back of any	y phot hole:
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Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 7050 feet. Drill horizontal leg to estimated 11596 lateral length, 19082 TMD. Hydraulically fracture stimulate and be capable of producing from the Marcellus Formation. Should we encounter an unanticipated void in the coal, we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface. We plan to run an ECP above the Gantz/Dominion Storage interval to aid in sealing off and isolating the storage interval.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

The stimulation will be completed with multiple stages divided over the lateral length of the well. Stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand, water, and chemicals. See attached list. Maximum pressure not to exceed 12,500 psi.

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 22.420 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 15.399 acres

23) Describe centralizer placement for each casing string:

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WV Department of **Environmental Protection**

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24) Describe all cement additives associated with each cement type:

nductor +WA, Casing to be drilled in w/ Dual Rotary Rig.
sh Water - 15.6 ppg PNE-1 + 2% bwcc CaCl, 40% Excass Viold = 1.20, CTS
al - Load: 15.4 ppg PNE-1 + 2.5% bwcc CaCl, 40% Excass / Tail: 15.6 ppg PNE-1 + 2.5% bwcc CaCl, zero% Excass. CTS
armediate - Lead: 15.4 ppg PNE-1 + 2.5% bwcc CaCl, 40% Excass, Tail: 15.6 ppg PNE-1 + 2.5% bwcc CaCl, zero% Excass. CTS
addiction - Lead: 15.4 ppg PNE-1 + 0.3% bwcc Tail: 1% bwcc EaCl, 10.75 gaids PTNL-1 - 0.3% bwcc MAPTIQ. Tail: 14.6 ppg PNE-1

25) Proposed borehole conditioning procedures:

*Note: Attach additional sheets as needed.

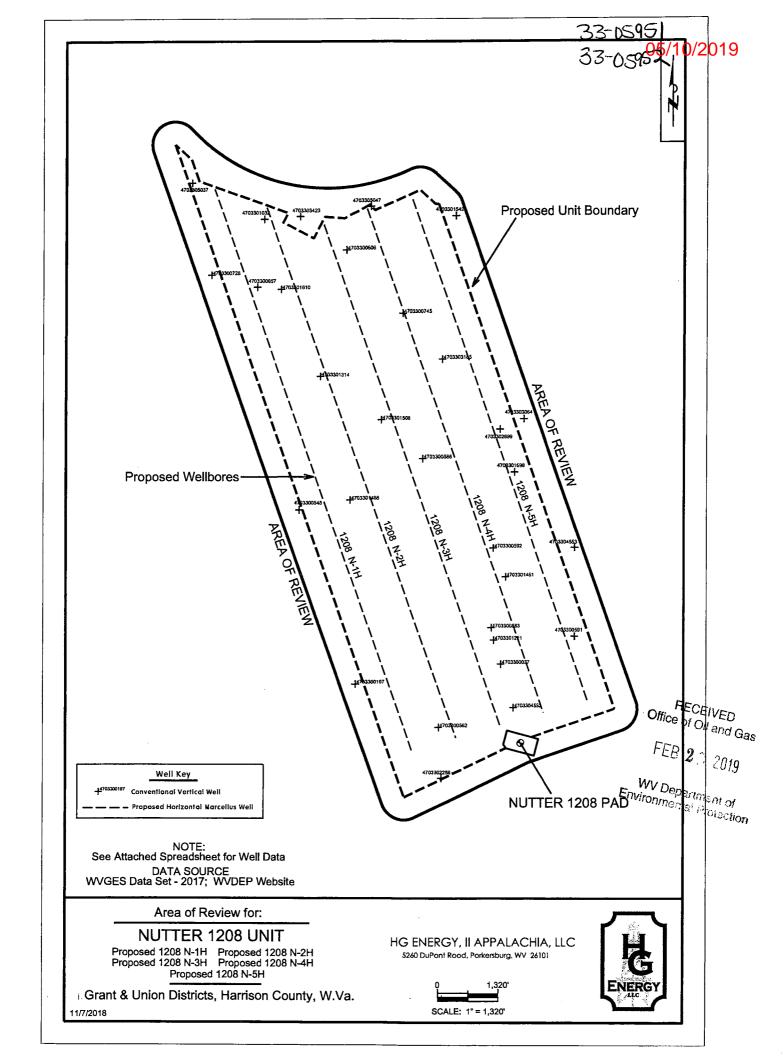


Nutter 1208 Well Pad (N-1H to N-5H, S-6H to S-10H) <u>Cement Additives</u>

Aaterial Name	Material Type		CAS #	67	CAC
		Premium NE-1 is a portland cement with	Ingredient name	%	CAS number
		early compressive	Portland cement Calcium oxide	90 - 100 1 - 5	65997-15-1 1305-78-8
		strength properties.	Magnesium oxide	1 - 5	1309-48-4
mium NE-1	Portland Cement	strength properties.	Crystalline silica: Quartz (SiO2)	0.1 - 1	14808-60-7
		Samuel and the same			
		Commonly called gel, it is a clay material used as a	Ingredient name	%	CAS number
		cement extender and to	bentonite	90 - 100	1302-78-9
		control excessive free	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7
		water.			
ntonite	Extender				
		A powdered, flaked or			
		pelletized material used	Ingredient name	%	CAS number
		to decrease thickening	Calcium chloride	90 - 100	10043-52-4
		time and increase the rate			
dum Chloride	Accelerator	of strength development			
adii Giloride	Mecciel atol				
		Graded (3/8 to 3/4 inch)	Ingredient name	%	CAS number
		cellophane flakes used as a lost circulation material.	No hazardous ingredient		- 4
o Flake	Lost Circulation	a lost circulation material.			

		PR 451 1-1-10-10-10-1			
		FP-13L is a clear liquid organic phosphate			
		antifoaming agent used in	de training and the second sec		
		cementing operations. It	Ingredient name	%	CAS number
		is very effective	Tributyl phosphate	90 - 100	126-73-8
		minimizing air			
		entrapment and			
		preventing foaming			
		tendencies of latex			
12.0	4000 4000 mm	systems.			
-13L	Foam Preventer				
		Head to estand	Ingredient name	%	CAS number
anulated Sugar	Retarder	Used to retard cement returns at surface.	Sucrose	90 - 100	57-50-1
andiaced Sugar	wetaldel	A proprietary product			
		that provides expansive			
		properties and improves			
		bonding at low to	Ingredient name	%	CAS number
		moderate	Calcium magnesium oxide	90 - 100	37247-91-9
1		temperatures.			
		Multi-purpose polymer			and the second
		additive used to control	Ingredient name	%	CAS number
		free fluid, fluid loss,	No hazardous ingredient		Office of Oll and Ga
i ina		rheology, and gas	no nezarada ingredient		- A - A - A - A - A - A - A - A - A - A
PA-170	Gas Migration	migration.			FEB 2 2 2019
		A synthetic pozzolan,			TILL & Zr LUIS
		(primarily Silicon Dioxide).			
		When blended with			WV Department of
		cement, Pozzolan can be used to create	Ingredient name	%	nviron CAS number tec
		lightweight cement	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7
		slurries used as either a	Calcium oxide	1-5	1305-78-8
		filler slurry or a sulfate			
		resistant completion			
(m)		resistant completion cement.			
(Fly Ash)	Base				
(Fly Ash)	Base				
(Fly Ash)	Base	cement.	Ingredient name	9/a	CAS number
(Fly Ash)	Base	cement. A low temperature	3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		2.191123
(Fly Ash)	Base	A low temperature retarder used in a wide range of slurry formulations to extend	Ingredient name Organic acid salt	% 40 - 50	CAS number Trade secret.
		cement. A low temperature retarder used in a wide range of slurry	3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		2.19 124 224
	Base Retarder	A low temperature retarder used in a wide range of slurry formulations to extend	3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		2.191123
		A low temperature retarder used in a wide range of slurry formulations to extend	3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		2.19 124 224
		A low temperature retarder used in a wide range of slurry formulations to extend	Organic acid salt Ingredient name 2-Butoxyethanol	40 - 50 % 20 - 30	CAS number
		A low temperature retarder used in a wide range of slurry formulations to extend	Organic acid salt Ingredient name 2-Butoxyethanol Proprietary surfactant	40 - 50 % 20 - 30 10 - 20	CAS number 111-76-2 Trade secret.
		A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.	Ingredient name 2-Butoxyethanol Proprietary surfactant D-Glucopyranose, oligomeric, C10-16-alkyl glycosides	% 20 - 30 10 - 20 5 - 10	CAS number 111-76-2 Trade secret. 110615-47-9
oz (Fly Ash)		cement. A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.	Organic acid salt Ingredient name 2-Butoxyethanol Proprietary surfactant	40 - 50 % 20 - 30 10 - 20	CAS number 111-76-2 Trade secret.

cement bonding.



33-0595<mark>05/10/2019</mark>

Office of Oil and G.

							Department of Profession	
	NUTTER 12	EXISTING WELLS LOCATED IN	ITHIN THE AREA OF REVIEW		12-N &	. 1	יניטין החכרולי	
COUNTY	FARM	OPERATOR NAME	FORMATION NAME	- 1	JE OF	-1	W LATITUDE	LONGITUDE
Harrison	Leeman Maxwell 5	Dominion Energy Transmission Inc.	Balltown	Storage	3186	- 1	- 1	-80,425238
Harrison	Leeman Maxwell	Dominion Energy Transmission Inc.	Fifty-foot	Storage	3216	ACTIVE	39.156758	-80.43644
Harrison	Mary Burnside	Dominion Energy Transmission Inc.	Benson	Gas	4225	ACTIVE	39.167206	-80.440704
Harrison	J B Gusman	Dominion Energy Transmission inc.	Benson	Gas	4315	ACTIVE	39,154132	-80,430082
Harrison	Leeman Maxwell	Dominion Energy Transmission inc.	Benson	Gas	4332	ACTIVE	39.160087	-80.42598
Harrison	Brooks Vanscoy	Dominion Energy Transmission inc.	Greenland Gap Fm	Gas	4316	ACTIVE	39.170253	-80,431202
Harrison	William W Brodwater III	Dominion Energy Transmission Inc.	Benson	Gas	4488	ACTIVE	39,159553	-80.419511
Harrison	William Broadwater	Dominion Energy Transmission inc.	Greenland Gap Fm	Gas	4382	ACTIVE	39.164871	-80.425798
Harrison	Bruce Cayton	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4225	ACTIVE	39:182756	-80.436977
Harrison	Jacob P Post	Dominion Energy Transmission Inc.	Balltown	Gas	3129	ACTIVE	39.181284	-80.447414
Harrison	G W Washburn	Dominion Energy Transmission Inc.	Greenland Gap Fm		2765	ACTIVE	39.178961	-80,432692
Harrison	O E Washburn	4		Gas				
Harrison	Jacob P Post	EQT Production Ca.	Benson	Gas Gas	4234	ACTIVE	39.180558	-80,443873
Harrison	William W. Broadwater Jr	EQT Production Co. EQT-Production Co.	Benson Benson	Gas Gas	4234 4265	ACTIVE ACTIVE	39.180558 39.184622	-80.443873 -80.443314
Harrison	W Burnside	EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Benson Greenland Gap Fm	Gas Gas Gas	4265 4415	ACTIVE ACTIVE	39.180558 39.184622 39.159357	-80,443873 -80,443314 -80,425797
Harrison	Broadwater Cw-130	EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc. Dominion Energy Transmission Inc.	Benson Benson Greenland Gap Fm Fifth	Gas Gas Gas Gas Gas Gas Gas w/ Oil Show	4234 4265 4415 2051	ACTIVE ACTIVE ACTIVE	39.180558 39.184622 39.159357 39.175188	-80.443873 -80.443314 -80.425797 -80.439027
Harrison	N Past	EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc. Dominion Energy Transmission Inc. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm Fifth Gantz	Gas Gas Gas Gas V Oll Show Storage	4234 4265 4415 2051 1836	ACTIVE ACTIVE ACTIVE ACTIVE	39.180558 39.184622 39.159357 39.175188 39.16313	-80,443873 -80,443314 -80,425797 -80,439027 -80,424865
Harrison	J.Cheuwront	EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc. Dominion Energy Transmission Inc. Dominion Energy Transmission Inc. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm. Fifth Gantz UNKNOWN	Gas Gas Gas Gas V Oll.Show Storage Gas	4234 4265 4415 2051 1836	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786	-80.443873 -80.443314 -80.425797 -80.439027 -80.424865 -80.436792
Harrison	Stephen Hinkle	EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm. Fifth Gantz UNKNOWN UNKNOWN	Gas Gas Gas Gas V/ Oil Show Storage Gas Gas	4234 4265 4415 2051 1836	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575	-80,443873 -80,443314 -80,425797 -80,439027 -80,439027 -80,424865 -80,43436992
Harrison		EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc. Ross & Wharton Gas Co., LLC	Benson Greenland Gap Fm. Fifth Gantz UNKNOWN UNKNOWN Greenland Gap Fm	Gas Gas Gas Gas Storage Gas Gas Gas Gas Gas Gas	4234 4265 4415 2051 1836 - - - - 2799	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575 39.172575	-80,443873 -80,443314 -80,425797 -80,425797 -80,439027 -80,424865 -80,436792 -80,434369 -80,428592
Harrison	W Burnside	EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Benson Greenland Gap Fm. Fifth Gantz UNKNOWN UNKNOWN Greenland Gap Fm.	Gas Gas Gas Gas Gas W/ Oil Show Storage Gas Gas Gas Gas Gas Gas Gas	4234 4265 4415 2051 1836 2799 2799	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE PLUGGED	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575 39.184786 39.180413	-80,443873 -80,443314 -80,425797 -80,4359027 -80,424865 -80,434369 -80,434369 -80,434369 -80,434369
Harrison	W Burnside L Waxwell	EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm. Fifth Gantz UNKNOWN UNKNOWN Greenland Gap Fm. Fifth Benson	Gas Gas Gas Gas Gas W/ Oil Show Storage Gas	4234 4265 4415 2051 1836 1836 2799 2102 4516	ACTIVE	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575 39.184786 39.180413 39.169414	-80,443873 -80,443314 -80,425797 -80,4339027 -80,424865 -80,434369 -80,434369 -80,424118
Harrison	W Burnside L Maxwell J B Gusman	EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm. Fifth Gantz UNKNOWN UNKNOWN Greenland Gap Fm. Fifth Benson UNKNOWN	Gas Gas Gas Gas Gas W/ Oil Show Storage Gas	4234 4265 4415 2051 1836 2799 2799 2102 4516 1760	ACTIVE	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575 39.184786 39.180413 39.169414 39.151084	-80,443873 -80,443314 -80,425797 -80,4339027 -80,424865 -80,434369 -80,424369 -80,424118 -80,422996
Harrison	W Burnside L Waxwell J B Gusman K M Patton/R Reed 1	EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm. Fifth Gantz UNKNOWN UNKNOWN Greenland Gap Fm. Fifth Benson UNKNOWN Greenland Gap Fm.	Gas Gas Gas Gas Gas Storage Gas	4234 4265 4415 2051 1836 2799 2709 2102 4516 1760 3011	ACTIVE PLUGGED	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575 39.184786 39.180413 39.169414 39.151084 39.171995	-80,443873 -80,443314 -80,425797 -80,4339027 -80,424865 -80,434369 -80,424369 -80,424118 -80,42239 -80,42239
Harrison	W Burnside L Maxwell J-B Gusman K M Patton/R Reed 1 J-Chevront (CW-154)	EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm. Fifth Gantz UNKNOWN UNKNOWN Greenland Gap Fm. Fifth Benson UNKNOWN Greenland Gap Fm. Greenland Gap Fm.	Gas Gas Gas Gas Gas Storage Gas	4234 4265 4415 2051 1836 2799 2799 2102 4516 1760 3011	ACTIVE PUJGGED PUJGGED	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575 39.180413 39.169414 39.151084 39.171995 39.172605	-80,443873 -80,443314 -80,425797 -80,4339027 -80,434369 -80,434369 -80,424369 -80,424118 -80,42299 -80,42239 -80,42239
	W Burnside L Maxwell L Maxwell J B Gusman K M Patton/R Reed 1 J Chevront (CW-154) Joseph Cheuvront	EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm Fifth Gantz UNKNOWN UNKNOWN Greenland Gap Fm Fifth Benson UNKNOWN Greenland Gap Fm Greenland Gap Fm Hampshire Grp	Gas Gas Gas Gas Gas Storage Gas	4234 4265 4415 2051 1836 2799 2799 2102 4516 1760 3011 2933	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE PLUGGED PLUGGED PLUGGED	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575 39.180413 39.169414 39.151084 39.171995 39.172605	-80.443873 -80.443314 -80.425797 -80.4339027 -80.434369 -80.434369 -80.424369 -80.42209 -80.42209 -80.422373 -80.42239 -80.423373
Harrison	W Burnside L Maxwell J B Gusman K M Patton/R Reed 1 J Chevront (CW-154) Joseph Cheuvront Thad Curry	EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm. Fifth Gantz UNKNOWN UNKNOWN Greenland Gap Fm. Fifth Benson UNKNOWN Greenland Gap Fm. Greenland Gap Fm. Hampshire Grp Hampshire Grp	Gas Gas Gas Gas Gas Storage Gas	4234 4265 4415 2051 1836 2799 2799 2102 4516 1760 3011 2933 1749	ACTIVE PLUGGED PLUGGED PLUGGED PLUGGED PLUGGED	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575 39.180413 39.169414 39.151084 39.172626 39.176214 39.176214 39.176214	-80.443873 -80.443314 -80.425797 -80.4339027 -80.434369 -80.434369 -80.424369 -80.42209 -80.42209 -80.422373 -80.42239 -80.423373 -80.422658
Harrison Harrison	W Burnside L Maxwell J B Gusman K M Patton/R Reed 1 J Chevront (CW-154) Joseph Cheuvront Thad Curry III	EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm. Fifth Gantz UNKNOWN UNKNOWN Greenland Gap Fm. Fifth Benson UNKNOWN Greenland Gap Fm. Greenland Gap Fm. Hampshire Grp Hampshire Grp Misc Sands-BNSN/BRLR	Gas Gas Gas Gas Gas Storage Gas	4234 4265 4415 2051 1836 2799 2799 2102 4516 1760 3011 2933 1749 4480	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE PLUGGED PLUGGED PLUGGED PLUGGED ACTIVE	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575 39.180413 39.169414 39.151084 39.172605 39.176214 39.176214 39.176214 39.184786 39.184786	-80.443873 -80.443314 -80.425797 -80.439027 -80.434365 -80.434369 -80.424369 -80.42209 -80.42209 -80.422373 -80.42239 -80.423373 -80.429658 -80.42303
Harrison Harrison Harrison	W Burnside L Maxwell J B Gusman K M Patton/R Reed 1 J Chevront (CW-154) Joseph Cheuvront Thad Curry III	EQT Production Co. EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm. Fifth Gantz UNKNOWN UNKNOWN Greenland Gap Fm. Fifth Benson UNKNOWN Greenland Gap Fm. Greenland Gap Fm. Hampshire Grp Hampshire Grp Hampshire Grp Misc Sands-BNSN/BRLR Misc Sands-BNSN/BRLR	Gas	4234 4265 4415 2051 1836 2799 2799 2102 4516 1760 3011 2933 1749 1980 4638	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE PLUGGED PLUGGED PLUGGED PLUGGED ACTIVE PLUGGED ACTIVE ACTIVE	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575 39.180413 39.169414 39.171084 39.172605 39.176214 39.176214 39.176214 39.184786 39.185302 39.164873	-80.443873 -80.443314 -80.425797 -80.4339027 -80.434365 -80.434369 -80.434369 -80.424009 -80.42209 -80.422373 -80.423373 -80.423373 -80.42303
Harrison Harrison Harrison Harrison	W Burnside L Maxwell J B Glusman K M Patton/R Reed 1 J Chevront (CW-154) Joseph Cheuvront Thad Curry III Linds J Maxwell Post Heritage LLC	EQT Production Co. EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm. Fifth Gantz UNKNOWN UNKNOWN Greenland Gap Fm. Fifth Benson UNKNOWN Greenland Gap Fm. Greenland Gap Fm. Hampshire Grp Hampshire Grp Hampshire Grp Misc Sands-BNSN/BRLR Misc Sands-BNSN/BRLR Greenland Gap Fm.	Gas	4234 4265 4415 2051 1836 2799 2799 2102 4516 1760 3011 2933 1749 1980 4638 4638	ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE PLUGGED PLUGGED PLUGGED ACTIVE PLUGGED ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE	39.180558 39.184622 39.159357 39.175188 39.16313 39.167786 39.172575 39.180413 39.169414 39.151084 39.172605 39.176214 39.176214 39.176214 39.184786 39.184786 39.185302 39.164873 39.186816	-80.443873 -80.443314 -80.425797 -80.4359027 -80.434369 -80.434369 -80.424369 -80.42209 -80.42209 -80.4223373 -80.4223373 -80.4223373 -80.424303 -80.424303 -80.424303
Harrison Harrison Harrison Harrison Harrison Harrison	W Burnside L Maxwell J B Gusman K M Patton/R Reed 1 J Chewront (CW-154) Joseph Cheuvront Thad Curry III Linda J Maxwell Post Heritage LLC Robert M Lewis/C J Lewis	EQT Production Co. EQT Production Co. EQT Production Co. Dominion Energy Transmission Inc. Dominion Energy Transmission Inc.	Benson Greenland Gap Fm Fifth Gantz UNKNOWN Greenland Gap Fm Fifth Benson LINKNOWN Greenland Gap Fm Greenland Gap Fm Hampshire Grp Hampshire Grp Hampshire Grp Hampshire Grp Misc Sands-BNSN/BRLR Misc Sands-BNSN/BRLR Greenland Gap Fm	Gas	4234 4265 4415 2051 1836 2799 2799 2799 2102 4516 1760 3011 2933 1749 1980 4480 4638 4638	ACTIVE	39.180558 39.184622 39.159357 39.175188 39.16313 39.16313 39.167786 39.180413 39.159414 39.151084 39.172505 39.176214 39.176214 39.176214 39.176214 39.176214 39.15302 39.164873 39.186816 39.185366	-80.443873 -80.443314 -80.425797 -80.425797 -80.42565 -80.42865 -80.424369 -80.424369 -80.426992 -80.426118 -80.426118 -80.425239 -80.425239 -80.425239 -80.425239 -80.425239 -80.425239 -80.425239 -80.425239 -80.425239 -80.425239 -80.425373
	COUNTY Harrison	Leeman Max Leeman Max Mary Burnsi J B Gusman Leeman Max Brooks Yans William Bro Bruce Cayto Jacob P Post G W Washbix	Leeman May Leeman May Leeman May Mary Burnsi J B Gusman Leeman Máy Brooks Vans William W B William Bro Bruce Cayto Jacob P Post	Leeman Mas Leeman Mas Leeman Mas Leeman Mas Brooks yans Brooks yans William Wa William Bros Bruce Cayto Jacob P Post	EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR: NUTTER 1208 NORTH UNIT AND PROPOSED WELLS N-1H, N-2H, FARM OPERATION NAME Leeman Maxwell Dominion Energy Transmission Inc. Leeman Maxwell Dominion Energy Transmission Inc. Heavy Burnside Dominion Energy Transmission Inc. Benson J.B. Gusman Dominion Energy Transmission Inc. Brooks Vanscoy Dominion Energy Transmission Inc. Brooks Vanscoy Dominion Energy Transmission Inc. Brooks Vanscoy Dominion Energy Transmission Inc. Bruce Cayton Dominion Energy Transmission Inc. Bruce Cayton Dominion Energy Transmission Inc. Bruce Sayton Dominion Energy Transmission Inc. Benson Bruce Cayton Dominion Energy Transmission Inc. Balltown Greenland Gap Fm Bruce Cayton Dominion Energy Transmission Inc. Greenland Gap Fm Bruce Cayton Dominion Energy Transmission Inc. Greenland Gap Fm Bruce Cayton Dominion Energy Transmission Inc. Greenland Gap Fm Bruce Cayton Dominion Energy Transmission Inc. Greenland Gap Fm Bruce Cayton Dominion Energy Transmission Inc. Greenland Gap Fm Bruce Cayton Greenland Gap Fm Bruce Cayton Greenland Gap Fm Bruce Cayton Dominion Energy Transmission Inc. Greenland Gap Fm Greenland Gap Fm Bruce Cayton Greenland Gap Fm Bruce Cayton Greenland Gap Fm Bruce Cayton Greenland Gap Fm Greenland Gap Fm	EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR: NUTTER 1208 NORTH UNIT AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H & N- FARM OPERATOR NAME FARM OPERATOR NAME FARM PARAMEL PROPOSED WELLS N-1H, N-2H, N-3H, N-4H & N- FARM OPERATOR NAME FORMATION NAM	EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR: NUTTER 1208 NORTH UNIT AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H & N-5H FARM: Operation Renery Transmission Inc. Leeman Maxwell Dominion Energy Transmission Inc. Leeman Maxwell Dominion Energy Transmission Inc. Leeman Maxwell Dominion Energy Transmission Inc. Brooks Variscoy Milliam W Brodwater III Dominion Energy Transmission Inc. William Renergy Transmission Inc. Benson Gas 4315 ACTIVE William Renergy Transmission Inc. William Renergy Transmission Inc. William Renergy Transmission Inc. William Renergy Transmission Inc. Benson Gas 4386 ACTIVE Benson Gas 4315 ACTIVE William Renergy Transmission Inc. Greenland Gap Fm Gas 4380 ACTIVE Bruce Cayton Dominion Energy Transmission Inc. Greenland Gap Fm Gas 4325 ACTIVE Bruce Cayton Dominion Energy Transmission Inc. Greenland Gap Fm Gas 4325 ACTIVE Bruce Cayton Dominion Energy Transmission Inc. Ballown Gas 4325 ACTIVE ACTIVE Bruce Cayton Dominion Energy Transmission Inc. Ballown Gas 4325 ACTIVE ACTIVE ACTIVE Bruce Cayton Dominion Energy Transmission Inc. Greenland Gap Fm Gas 4325 ACTIVE ACTIVE ACTIVE ACTIVE Bruce Cayton Gas 4326 ACTIVE Bruce Cayton Gas 4327 ACTIVE Bruce Cayton Gas 4328 ACTIVE Bruce Cayton Gas 4329 ACTIVE Bruce Cayton Gas 4329 ACTIVE Bruce Cayton Gas 4329 ACTIVE Bruce Cayton Gas 4480 ACTIVE Bruce Cayton Gas 4481 ACTIVE Bruce Cayton Gas 4482 ACTIVE Bruce Cayton Gas 4483 ACTIVE Bruce Cayton Gas 4484 ACTIVE Bruce Cayton Gas 4485 ACTIVE Bruce Cayton Gas 4486 ACTIVE Bruce Cayton Gas 4486 ACTIVE Bruce Cayton Gas 4486 ACTIVE Bruce Cayton Gas	EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR: NUTTER 1208 NORTH UNIT AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H & N-FABM OPERATOR MAME FABM Leeman Maxwell 5 Dominion Energy Transmission Inc. Leeman Maxwell 5 Dominion Energy Transmission Inc. Mary Burnside 6 Dominion Energy Transmission Inc. Easuran Dominion Energy Transmission Inc. Leeman Maxwell 5 Dominion Energy Transmission Inc. Benson 6as 4231 Brooks Vanscoy Dominion Energy Transmission Inc. William W Brodwater III Dominion Energy Transmission Inc. William Broadwater III Dominion Energy Transmission Inc. Benson 6as 4383 Bruce Cayton Cayton Cayton Cayton Cas A383 Greenland Gap Fm 6as 4383 Greenland Gap Fm 6as 4383 Greenland Gap Fm 6as 4383 Greenland Gap Fm 6as 4323 Greenland Gap Fm 6as 4323



December 5, 2018

Dominion Energy Transmission Attn: Charles Cunningham 2397 Davisson Run Road Clarksburg, WV 26301

RE:

Area of Review - Nutter 1208 Well Pad (N-1H to N-5H) Hydraulic Fracturing Notice

Dear Sir.

HG Energy II Appalachia, LLC, has developed a Marcellus pad (Nutter 1208 pad) located in Harrison County, WV. As an owner or operator of a conventional natural gas well in this area, we are requesting your assistance in this

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 7050' TVD) and existing conventional

HG Energy anticipates conducting hydraulic fracturing of the Nutter 1208 Pad during the fourth quarter of 2019. We have identified conventional natural gas wells operated by your company within 500' of one of the newly planned laterals (Nutter 1208 N-1H). A plat for the well is attached.

We recommend conventional well operators conduct the following activities before, during and after the fracturing operation.

Inspect surface equipment prior to fracturing to establish integrity and well conditions.

2. Observe wells closely during and after fracturing and monitor for abnormal increases in gas, water or

3. Inspect or install master valves rated at 3,000 psi or other necessary equipment for wellhead integrity.

4. Notify the OOG and HG Energy if any changes in water, gas production, pressure or other anomalies are identified.

Should you have any questions or desire further information, please contact me at 304-420-1119 or dwhite@hgenergyllc.com. You may also contact the WV Office of Oil and Gas at 304-926-0444.

Sincerely,

Diane White

Diane White

Enclosure

Wy Department of Environmerital Protection



December 5, 2018

EOT Production Company 115 Professional Place Bridgeport, WV 26330

RE:

Area of Review - Nutter 1208 Well Pad (N-1H to N-5H) Hydraulic Fracturing Notice

Dear Sir.

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Should you have any questions or desire further information, please contact me at 304-420-1119 or dwhite@hgenergylic.com. You may also contact the WV Office of Oil and Gas at 304-926-0444.

Sincerely,

Diane White

Enclosure

Office of Oil and Gas

WV Department of Environmental Profession



December 5, 2018

Alliance Petroleum Corporation 67 Collins Run Road Gienville, WV 26351

RE:

Area of Review - Nutter 1208 Well Pad (N-1H to N-5H) Hydraulic Fracturing Notice

Dear Sir:

HG Energy II Appalachia, LLC, has developed a Marcellus pad (Nutter 1208 pad) located in Harrison County, WV. As an owner or operator of a conventional natural gas well in this area, we are requesting your assistance in this matter.

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Should you have any questions or desire further information, please contact me at 304-420-1119 or dwhite@hgenergyllc.com. You may also contact the WV Office of Oil and Gas at 304-926-0444.

Sincerely,

Diane White

Enclosure

RECEIVED
Office of Oil and Gas

FED 2 7 2019

WV Department of Environments! Protection



1208 N-3H

Marcellus Shale Horizontal Harrison County, WV

									Harrison C	- a.i.e.y, 11.	
						1208 N	1-3H SF	L	1	4218984.95N 18036	609.3E
round Ele	evation		1149			1208	N-3H LI	•	14	219300.79N 18033	19.24E
Azm			340.53	9°		1208 N	I-3H BH	íĽ.	14	230229.88N 17994	57.31E
WELLBORE D	IAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
ensoner.	hand the same has										
			30" 157.5#				772	N/A, Casing to be drilled	22	Ensure the hole is clean at	Conductor casing = 0.5" wal
	x	30"	LS	Conductor	0	120	AIR	in w/ Dual Rotary Rig	N/A	TD.	thickness
			7.					15.6 ppg PNE-1 + 3%		Once casing is at setting depth, circulate a minimum	Surface casing = 0.438" wal
		26"	20" 94# J-55	Fresh Water	0	135	AIR	bwoc CaCl 40% Excess	Centralized every 3 joints to surface	of one hole volume with	thickness
			34# 3-33	Fresh Water	0	650		Yield=1.20 / CTS	joints to surface	Fresh Water prior to pumping cement.	Burst=2110 psi
	^ 1			Kittaning Coal	810	815		Lead: 15.4 ppg PNE-1 +	Bow Spring on every	Once casing is at setting	
			13-3/8" 68#	Little/Big Lime	1276 / 1317	1301 / 1393	AIR / KCL	2.5% bwoc CaCl 40% Excess / Tail: 15.9	joint	depth, Circulate and condition at TD. Circulate a	Intermediate casing = 0.480
	l x	17.5"	J-55 BTC	Injun / Gantz (Storage)	1393 / 1680	1499 / 1740	Salt Polymer	ppg PNE-1 + 2.5% bwoc	"will also be running ECP for isolating	minimum of one hole	wall thickness Burst=3450 psi
				Intermediate 1	0	1890	1 diyindi	CaCl zero% Excess. CTS	storage zone*	volume prior to pumping cement.	
x	x			Fifty / Thirty Foot	1800 / 1880	1847 / 1892		Lead: 15.4 ppg PNE-1 +		Once casing is at setting	
				Gordon Stray / Gordon	1935 / 2000	2000 / 2090	AIR / KCL	2.5% bwoc CaCl	Bow Spring on first 2	depth, Circulate and	Intermediate casing = 0.395
		12.25"	9-5/8" 40# J-55 BTC	5th Sand	2185	2220	Salt	40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc	joints then every third joint to 100' form	condition mud at TD. Circulate a minimum of one	wall thickness
X	X		0.00 010	Bayard Sand	2275	2310	Polymer	CaCl	surface	hole volume prior to	Burst=3950 psi
				Intermediate 2	0	2700		zero% Excess. CTS		pumping cement.	
x	X			Speechley	2895	2913			Box 4 - 0 to 1 to 1 to 100		
		8.5" Vertical		Balltown	3115	3155	9.0ppg	Total and	Run 1 spiral centralizer every 5 joints from the		
		o.5 vertical	0.00	Benson	4200	4233	SOBM	<u>Lead</u> : 14.5 ppg POZ:PNE-1 + 0.3%	top of the curve to surface.		
				West Falls	4770	6015		bwoc R3 + 1% bwoc	surface.		
				Rhinestreet	6015	6290		EC1 + 0.75 gal/sk FP13L + 0.3% bwoc		Once on bottom/TD with casing, circulate at max	
		11 11 11	2.74	Cashaqua	6290	6491		MPA170		allowable pump rate for at	Production casing = 0.415"
x	x		5-1/2" 23#	Middlesex	6491	6571	11.5ppg-	<u>Tail</u> : 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75		least 2x bottoms up, or until returns and pump	wall thickness Burst=14520 psi
		8.5" Curve	P-110 HC	West River	6571	6664	12.5ppg	gal/sk FP13L + 50%		pressures indicate the hole	Note:Actual centralizer
		m	CDC HTQ	Burkett	6664	6690	SOBM	bwoc ASCA1 + 0.5% bwoc MPA170	Run 1 spiral centralizer every 3 joints from the	is clean. Circulate a minimum of one hole	schedules may be changed due to hole conditions
		WV D Environn	F	Tully Limestone	6690	6794		20% Excess	1st 5.5" long joint to the	volume prior to pumping	
		000		Hamilton	6794	7013		Lead Yield=1.19 Tail Yield=1.94	top of the curve.	cement.	
		end	69 0	Marcellus	7013	7064	11 For-	CTS			
		8.5" Lateral	and and		19082	7050	11.5ppg- 12.5ppg				
×	×	Pato s	1.9	Onondaga	7064		SOBM				
		. X	٨	X	X		X	X	X		X. In the second
	LP @ 705	50' TVD / 7486' MD			5.5" Hole - Cemente 5-1/2" 23# P-110 H				+/-115	96' ft Lateral	TD @ +/-7050' TVD +/-19082' MD

List of Frac Additives by Chemical Name and CAS

Nutter 1208 Well Pad (N-1H to N-5H, S-6H to S-10H)

Chemical Name	CAS#	Multiple CAS #'s
Pro Shale Slik 405	Mixture	68551-12-2
		7647-14-5
		12125-02-9
		64742-47-8
Pro Hib II	Mixture	68412-54-4
		68607-28-3
		107-21-1
		111-76-2
		67-56-1
		107-19-7
Silica Sand and Ground Sand	Mixture	14808-60-7
		1344-28-1
		1309-37-1
		13463-67-7
Hydrochloric Acid 22 DEG BE	7647-01-0	
PROGEL - 4.5	64742-96-7	
BIO CLEAR 2000	Mixture	25322-68-3
		10222-01-2
SCALE CLEAR SI 112	107-21-1	
PROBREAK 4	Mixture	57-50-1
		107-21-1
Sulfamic Acid	5329-14-6	
PRO - Flow - 102-N	Mixture	67-63-0
		68439-45-2
		2687-96-9
PROGEL - 4	9000-30-0	

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Office of Oil and Gas

FEB 2 2 2019

WV Department of Environmental Protection WW-9 (4/16) API Number 47 - 033 - 05952
Operator's Well No. Nutter 1208 N3H
STATE OF WEST VIRGINIA

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name HG Energy II Appalachia, LLC	OP Code 494501907	
	West Milford 7.5'	
Do you anticipate using more than 5,000 bbls of water to complete the proposed w	well work? Yes V No No	
Will a pit be used? Yes No √		
If so, please describe anticipated pit waste: NA		
Will a synthetic liner be used in the pit? Yes No If s	f so, what ml.?	
Proposed Disposal Method For Treated Pit Wastes:	Cilon	
Land Application	5000	
Underground Injection (UIC Permit Number	5/1/2019	}
Reuse (at API Number TBD - At next anticipated well Off Site Disposal (Supply form WW-9 for disposal local	ocation)	
Other (Explain	canon)	
Will closed loop system be used? If so, describe: Yes, cuttings and fluids will be collected in a closer	sed loop system, re-used or haufed to an approved disposal site or landfill,	
Orilling medium anticipated for this well (vertical and horizontal)? Air, freshwater	ter, oil based, etc. Venical-Air, Air/KCL SOBM, Horizontal-SOBM	
-If oil based, what type? Synthetic, petroleum, etc. Synthetic		
Additives to be used in drilling medium? Water, Soap, KCI, Barite, Base Oil, Wetting Ag	Agents	
Orill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Approx	oved Landfill	
-If left in pit and plan to solidify what medium will be used? (cement, lim	me, sawdust)_NA	
-Landfill or offsite name/permit number? See Attached		
Permittee shall provide written notice to the Office of Oil and Gas of any load of di West Virginia solid waste facility. The notice shall be provided within 24 hours of where it was properly disposed.		
I certify that I understand and agree to the terms and conditions of the GI on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of provisions of the permit are enforceable by law. Violations of any term or condition aw or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and am application form and all attachments thereto and that, based on my inquiry obtaining the information, I believe that the information is true, accurate, and contains for submitting false information, including the possibility of fine or impri	of Environmental Protection. I understand that the dition of the general permit and/or other applicab on familiar with the information submitted on the of those individuals immediately responsible for a complete. I am aware that there are significant.	he ole ois or
Company Official Signature Diane White		
Company Official (Typed Name) Diane White		
Company Official TitleAgent		
Subscribed and sworn before me this 17th day of April	. 20 19	
1119	N. D. III.	******
- CUA DI	NOTARY PUB	OFFICIAL SEA LIC. STATE OF
My commission expires $1(\frac{2}{202})$		MARK J SCHA H G Energy L L 5519, Vienna,

WW-9 (4/16)				
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API Number 47 -___ -Operator's Well No. Number 1208 N-2H

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

TEODS/ COTTINGS DISPOSAL & RECLAN	MATION PLAN	
Operator Name HG Energy II Appalachia, LLC	OP Code 494501907	
Watershed (HUC 10) Middle West Fork Creek Quadrangle	West Milford 7.5	
Do you anticipate using more than 5,000 bbls of water to complete the proposed we	vell work? Yes V No	
Will a pit be used? Yes No		_
If so, please describe anticipated pit waste: NA		
Will a synthetic liner be used in the pit? Yes No V If s	so, what ml.?	_
Proposed Disposal Method For Treated Pit Wastes:	< De)
Land Application	SDU 5/1/2	
Underground Injection (UIC Permit Number Reuse (at API Number TBD - At next anticipated well	5/1/2	<u>29</u> 19
Off Site Disposal (Supply form WW-9 for disposal loca	etion	
Other (Explain_		
Will closed loop system be used? If so, describe: Yes, cuttings and fluids will be collected in a closed	l loop system, re-used or hauled to an approved disposal site	or landfill,
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater	r, oil based, etc. Venical - Air, Airikta, SOBM, Horzons	a - 508M
-If oil based, what type? Synthetic, petroleum, etc. Synthetic		
Additives to be used in drilling medium? Water, Soap, KCI, Barice, Base Oil, Wetting Age	jents	
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Approve	ved Landfill	
-If left in pit and plan to solidify what medium will be used? (cement, lime	ne, sawdust) NA	
-Landfill or offsite name/permit number? See Attached		
Permittee shall provide written notice to the Office of Oil and Gas of any load of dri West Virginia solid waste facility. The notice shall be provided within 24 hours of r where it was properly disposed.	rill cuttings or associated waste rejected rejection and the permittee shall also di	l at any isclose
I certify that I understand and agree to the terms and conditions of the GE on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of provisions of the permit are enforceable by law. Violations of any term or conditional law or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and am application form and all attachments thereto and that, based on my inquiry of obtaining the information, I believe that the information is true, accurate, and compensations for submitting false information, including the possibility of fine or imprise	of Environmental Protection. I understation of the general permit and/or other familiar with the information submit f those individuals immediately respondente. I am aware that there are	and that the applicable ted on this onsible for
Company Official Signature Diane White		
Company Official (Typed Name) Diane White	· · · · · · · · · · · · · · · · · · ·	
Company Official Title Agent		
Subscribed and sworn before me this 17th day of April	, 20 19	=
- Colle	Notary Public	OFFICIAL SEAL
My commission expires 11/2/2021		MOTHEY PUBLIC. STATE OF WEST VIRSINA MARK J SCHALL H G Energy L L C PO Box 5519, Vierna, WV 28105 My Commission Expires November 2, 2021

Proposed Revegetation Trea	tment: Acres Disturbed 2	2.420 Prevegetation p	Н
Lime	3 Tons/acre or to corre	ct to pH 6.5	
Fertilizer type10)-20-20		
Fertilizer amount_		00 lbs/acre	
Mulch_ Hay	2	Tons/acre	
		Seed Mixtures	
Te	emporary	Perm	anent
Seed Type Tall Fescue	lbs/acre 40	Seed Type Tall Fescue	lbs/acre 40
Ladino Clover	5	Ladino Clover	5
Attach: Mans(s) of road, location, pi	t and proposed area for lan pit will be land applied, in ion area.	Iling and completion process Id application (unless engineered plans included dimensions (L x W x D) of the pit, and	iding this info have been d dimensions (L x W), and area in
Attach: Maps(s) of road, location, pi provided). If water from the acreage, of the land applicate Photocopied section of invol	t and proposed area for lan pit will be land applied, in ion area. Ived 7.5' topographic sheet	d application (unless engineered plans inclucted dimensions (L x W x D) of the pit, an	d dimensions (L x W), and area in
Attach: Maps(s) of road, location, pi provided). If water from the acreage, of the land applicate Photocopied section of invol	t and proposed area for lan pit will be land applied, in ion area. Ived 7.5' topographic sheet	d application (unless engineered plans inclucted dimensions (L x W x D) of the pit, an	d dimensions (L x W), and area in
Attach: Maps(s) of road, location, piprovided). If water from the acreage, of the land applicate Photocopied section of involution Approved by: Comments: Pre-seed	t and proposed area for lan pit will be land applied, in ion area. Ived 7.5' topographic sheet I DWawy Manual Amulch as soon a	d application (unless engineered plans incluclude dimensions (L x W x D) of the pit, an	d dimensions (L x W), and area in
Attach: Maps(s) of road, location, piprovided). If water from the acreage, of the land applicate Photocopied section of involution Approved by: Comments: Pre-seed	t and proposed area for lan pit will be land applied, in ion area. Ived 7.5' topographic sheet I DWawy Manual Amulch as soon a	d application (unless engineered plans incluctude dimensions (L x W x D) of the pit, an	regulation.
Attach: Maps(s) of road, location, piprovided). If water from the acreage, of the land applicate Photocopied section of involution Approved by: Comments: Pre-seed	t and proposed area for lan pit will be land applied, in ion area. Ived 7.5' topographic sheet I DWawy Manual Amulch as soon a	d application (unless engineered plans incluctude dimensions (L x W x D) of the pit, an	regulation. RECEIVED Office of Oil and G
Attach: Maps(s) of road, location, piprovided). If water from the acreage, of the land applicate Photocopied section of involution Approved by: Comments: Pre-seed	t and proposed area for lan pit will be land applied, in ion area. Ived 7.5' topographic sheet I DWawy Manual Amulch as soon a	d application (unless engineered plans incluctude dimensions (L x W x D) of the pit, an	regulation. RECEIVED Office of Oil and G

Cuttings Disposal/Site Water

Cuttings -Haul off Company:

Eap Industries, Inc. DOT # 0876278 1875 Smith Two State Rd. Atlasburg, PA 15004 1-888-294-5227

Waste Management 200 Rangos Lane Washington, PA 15301 724-222-3272

Environmental Coordination Services & Recycling (ECS&R) 8237 US Highway 19 Cochranton, PA 16314 814-425-7773

Disposal Locations:

Apex Environmental, LLC Permit # 06-08488 11 County Road 78 Amsterdam, OH 48903 740-548-4889

Westmoreland Waste, LLC Permit # 100277 111 Conner Lane Belle Vernon, PA 15012 724-929-7694

Sycamore Landfill Inc. Permit #R80-079001 05-2010 4301 Sycamore Ridge Road Hurricane, WV 25526 304-562-2611

Max Environnemental Technologies, Inc. Facility Permit # PAD004835146 / 901071, 233 Max Lane
Yukon, PA 25968
724-722-3500

Max Environnemental Technologies, Inc. Facility Permit # PAD05087072 / 301359 200 Max Drive Bulger, PA 15019 724-796-1571

Waste Management Kelly Run Permit # 100563 1801 Park Side Drive Elizabeth, PA 15087 412-884-7569

Waste Management South Hills (Arnoni) Permit # 100582 8100 Hill Road Library, PA 15129 724-348-7013 412-384-7569

Waste Management Arden Permit # 100172 200 Rangos Lane Washington, PA 15301 724-222-3272

Waste Management Meadowfili Permit # 1032 1488 Dawson Drive Bridgeport, WV 26330

Brooke County Landfill Permit # SWF-103-97 / WV 0109029 Rd 2 Box 410 Colliers, WV 26035 304-748-0014 05/10/2019

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WV Department of Environmental Protection Wetzel County Landfill Permit # SWF-1021-97 / WV 0109185 Rt 1 Box 158A New Martinsville, WV 26035 804-455-3800

05/10/2019

Energy Solutions, LLC Permit # UT 2800249 428 West 300 South Suite 200 Salt Lake City, UT 84101

Energy Solutions Services, Inc. Permit # R-79006-L24 1560 Bear Creek Road Oak Ridge, TN 37830

Northern A-1 Environnemental Services Permit ID MID020906814 8947 US 131 North, PO Box 1030 Kalkaska, MI 49646 281-258-9961

Water Haul off Companies:

Dynamic Structures, Clear Creek DOT # 720485 8790 State Route 7 New Waterford, OH 44445 830-892-0164

Nabors Completion & Production Services Go. PO Box 975682 Dallas, TX 75397-5682

Select Energy Services, LLC PO Box 208997 Dallas, TX 75820-8997

Nuverra Environmental Solutions 11942 Veterans Memorial Highway Masontown, WV 26542

Mustang Olifield Services LLC PO Box 739 St. Clairsville, OH 43950

Wilson's Outdoor Services, LLC 456 Cracraft Road Washington, PA 15801

Disposal Locations:

Solidification
Waste Management, Arden Landfill Permit # 100172
200 Rangos Lane
Washington, PA 15801
724-225-1589

Solidification/incineration
Soil Remediation, Inc. Permit # 02-20758
6065 Arrel-Smith Road
Lowelville, OH 44486
880-686-6825

Adams #1 (Buckeye Brine, LLC) Permit # 34-031-2-7177 28986 Airport Road Coshocton, OH 48812 740-575-4484 512-478-6545 CMS of Dalaware Inc. DBA CMS Olifield Serv 301 Commerce Drive Moorestown, NJ 08057

Force, inc. 1380 Rts. 286 Hwy. E, Sulte 803 Indiana, PA 15701

Solo Construction P.O. Box 544 St. Mary's, WV 26170

Equipment Transport 1 Tyler Court Carlisie, PA 17015

Myers Well Service, 2001 Ballpark Court Export, PA 15682

Burns Drilling & Excavating 618 Crabappie Road P.O. Bos Wind Ridge, PA 16880 RECEIVED
Office of Oil and Gas

FEB 29 2019

WV Department of Environmental Protection

Nichlos 1-A (SWIW #18) Permit # 8862 800 Cherrington Pkwy, Suite 200 Coraopolis, PA 15108 412-829-7275

Groselle (SWIW #34) Permit # 4096 Rt. 88 Garrettsville, OH 719-276-4816

Kemble 1-D Well Permit # 8780 7675 East Pike Norwich, Oh 42767 614-648-8898 740-796-6495 Adams #2 (Buckeye Brine, LLC) 2205 Westover Road Austin Tx 78708 Permit # 34-031-2-7178 740-575-4484 612-478-6545

Adams #3 (Buckeye Brine, LLC) Permit #34-031-2-7241-00-00 2680 Exposition, Suite 117 Austin, TX 78703 51.2-478-6545

Mozena #1 Well (SWIW # 18) Permit # 84-157-2-5511-00-00 5367 E. State Street Newcomerstown, OH 48832 740-769-3966

Goff SWD #1 (SWIW # 27) Permit # 84-119-2-8776-000 300 Charrington Pkwy, Suite 200 Cornopolis, PA 15108 412-829-7275

SOS D#1 (SWIW #12) Permit # 84-059-2-4202-00-00 Silcor Oilfield Services, Inc. 2939 Hubbard Road Youngstown, PH 44505

Dudley #1 UIC (SWIW #1) Permit # 84-121-2-2459-00-00 Select Energy Services, LLC 7994 S. Pleasants Hwy 51. Marys, WV 26170 304-665-2652

OH UIC#1 Bu keya UIC Barnesville 1 & 2 CNX Gas Com, Hany, LLC 1000 Consol Energy Drive Permit # 34-013-2-0609-00-00 Permit # 34-013-2-0614-00-00 804-323-6568

US Steele 11385 Permit # 47-001-00561 200 Evergreen Drive Waynesburg, PA 15730 804-828-6568

Chapin #7 UIC (SWIW #7) Permit # 34-083-2-4197-00-00 Elkhead Gas& Oil Company 12163 Marne Rd. NE Newark, DH 43055 740-763-3966

05/10/2019

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WV Department of Environmental Protection

HG Energy II Appalachia, LLC

Site Safety Plan

Nutter 1208 Well Pad 104 Hidden Valley Rd Jane Lew Harrison County, WV 26378

November 2018: Version 1

For Submission to
West Virginia Department of Environmental Protection yellow Office of Oil and Gas
Office of Oil and Gas

FEB 2 2 2019

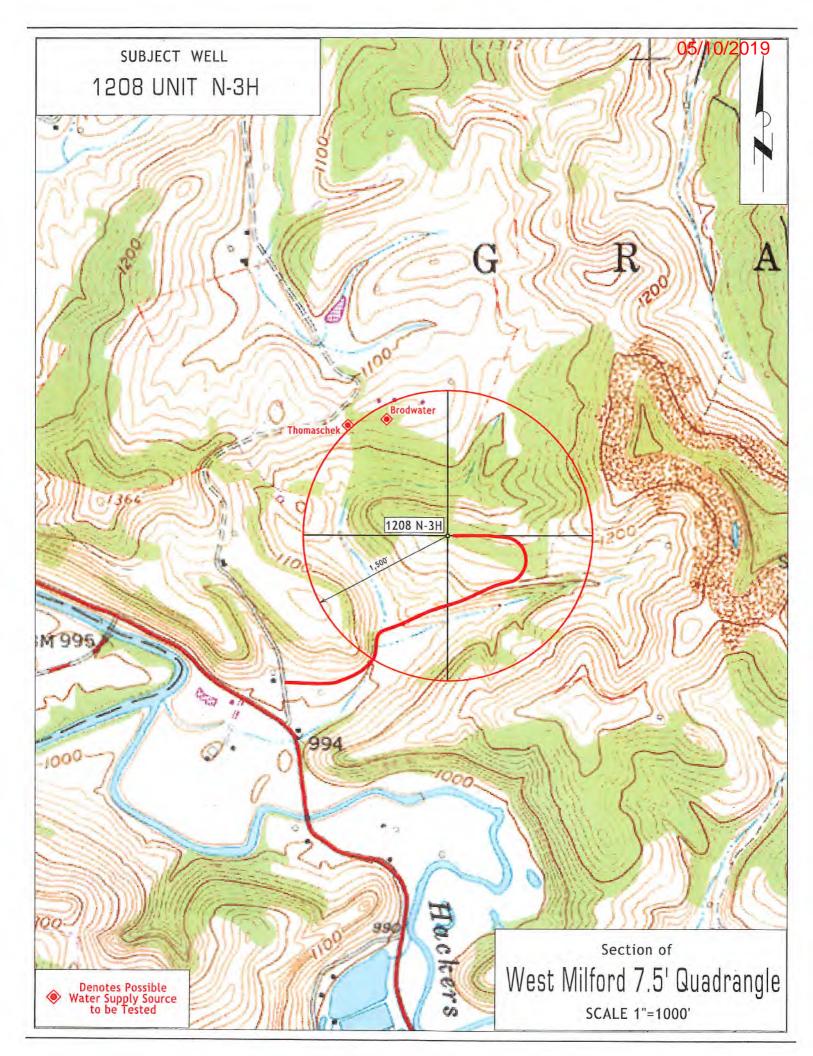
WV Department of Environmental Protection

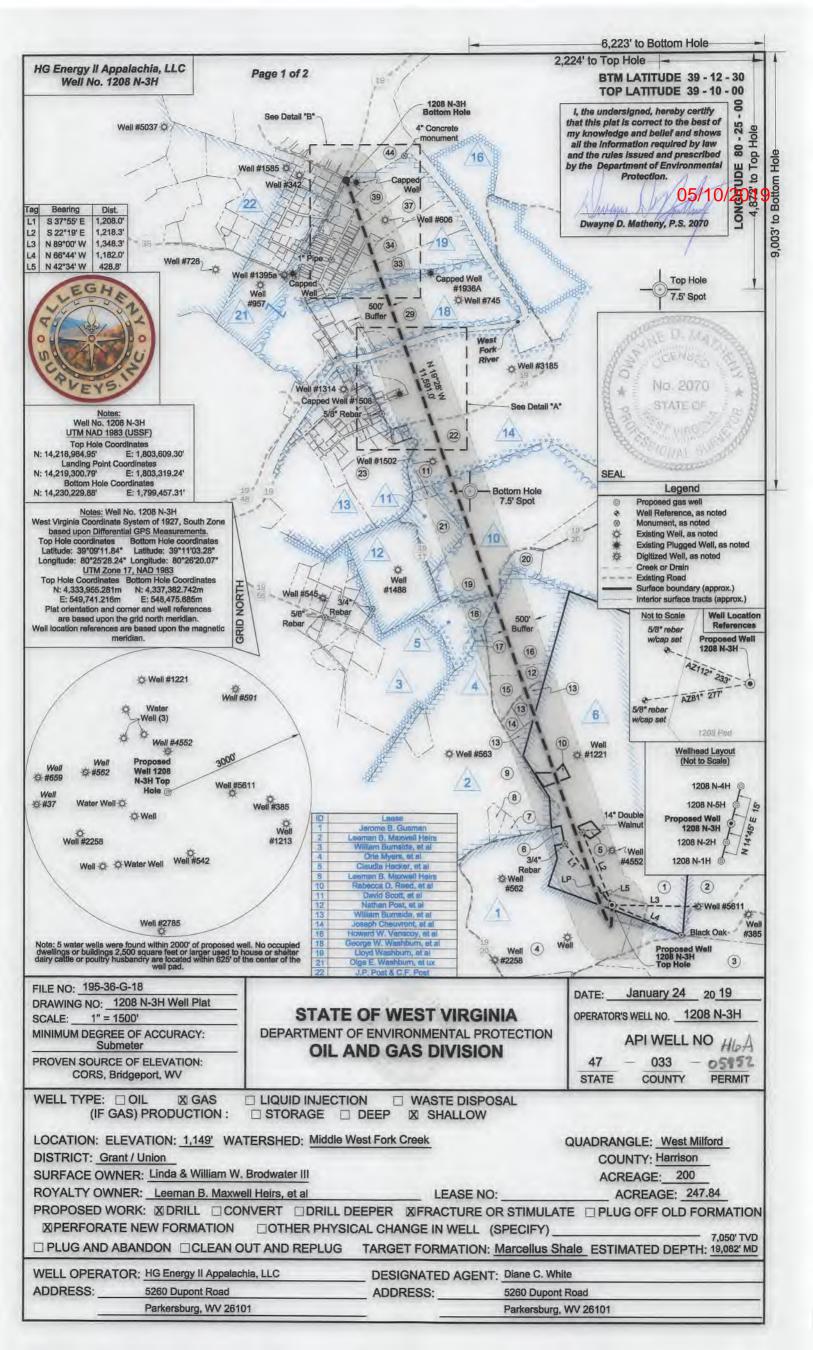
HG Energy II Appalachia, LLC

5260 Dupont Road

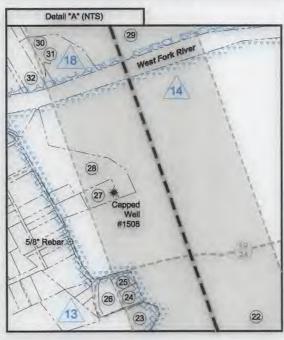
50W 1/28/2019

Parkersburg, WV 26101





Detail "B" (NTS)	
1 3 - H	45 s' Concrete monument
48) 46)	monument (
49 47 44	
7-11/	43
(51) 50	
Cappe	d (42)
(52) (53) Capper * We	
(56) (55)	
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1 5 340 + 2	
58 60	39
59 7 61 62	
	1 *
63 38 1	Well #606
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21 4 64 65	V
67 66	36 34
68)	35
70 69	
/1" Pipe (68)	
100	33
THE A	1
2 () 19	The Care
	29
	18



No.	TM / Par	Owner	Bk / Pg	Ac.
1.00	2901 / 160	Omio,	-	0.172
72	2901 / 159	Adam Lee Carder	W171 / 954	0.172
	2901 / 137			0.406
71	2901 / 140	Elma Toothman & Cynthia Marsh, et al	F094 / 606	0.344
70	2901 / 142	Jeremey S. Wagoner	1318 / 925	0.172
-	2901 / 141		100000000000000000000000000000000000000	0.172
69	2901 / 166	Bruce & Luella Caylon	1373 / 35	0.172
	2901 / 164			0.344
00	2901 / 162		1562 / 169	
68	2901 / 144	TAD Investments LLC	05/1,0/2	20149
	2901 / 143		1562 / 172	0.172
67	2901 / 145	Billy J. Guhl	1557 / 649	0.172
100	2901 / 146			0.172
66	2901 / 148	Bradford & Nicholas Cottrill Dixle L. Quickle	1506 / 608 1357 / 413	0.24
	2901 / 149	Rebecca Morris	W157 / 802	0.33
75.4	2901 / 128	- 17 20 20 20 20 20 20 20 20 20 20 20 20 20		1.06
63	2901 / 100	Kathryn Burnside	1577 / 314	0.64
62	2901 / 129	Scharolette B. Dunlap	1348 / 347	1.44
61	2901 / 101.1	Grant-Union PSD	1173 / 393	0.02
	2901 / 101.2	Mary Tiney	1449 / 85	0.84
59	2901 / 215	Michael Price	1398 / 915	1.25
58	2901 / 221	Gene Edward & Linda Carole Cox	1087 / 950	0.817
57	2901 / 17.5	Mary K. Heath	1478 / 390	0.45
56	2901 / 17.6	Richard D. & Melissa S. Grimm	1426 / 49	0.55
55	2901 / 17.3	Todd J. Pratt	1489 / 872	0.45
54	2901 / 17.7	Rodney J. Rollins	1447 / 1001	0.56
53	2901 / 18	Charles & Carrie Peck	1364 / 61	0.55
52	2901 / 176	Jamie Baker & Karla Kovar	1585 / 926	0.50
51	2901 / 179	John C. & Shasta Miller	1582 / 889 1560 / 180	0.50 1.17
50 49	2901 / 71 2901 / 56	Richard W. & Riva L. Bartlett Gregory Somerville	1422 / 1277	0.97
48	2901/59	Charles & Lea Ann Dobbins	1107 / 731	0.51
1000	2901 / 74		100000000000000000000000000000000000000	0.53
47	2901/73	Ralph E. & Shelvie J. Campbell	921 / 270	0.38
46	2901 / 75	Hilda J. Flint	1183 / 1157	0.87
45	2901 / 75.1	Sharon D. Emerson	W161 / 477	0.57
44	404 / 16	Keffrey & Victoria J. Roark	1518 / 173	3.06
43	2901 / 108	Larry G. & Lisa S. Campbell	1344 / 830	0.54
42	2901 / 107	Erin K. & John D. Vaughn II John D. & Teresa C. Vaughn	1535 / 813 1502 / 142	1.773
40	2901 / 106.1 2901 / 105	Joshua B. & Amber D. Campbell	1427 / 90	0.50
39	404/34	Callwell J. & Patricia F. Hutson	1209 / 163	11.00
38	2901 / 152	Harrison County Commission	1494 / 195	0.52
100	2901 / 150	Harrison County Commission		0.17
37	404 / 35	Bruce W. & Luella R. Cayton	1029 / 339	12.80
36	404 / 35.1	AND	1317 / 470	0.30
7	404 / 64			0.17
35	404 / 63 404 / 62	Dennis J. Burnside Jr., et al	F112 / 1123	0.17
00	404 / 61			0.17
	404 / 60		- Indiana	0.17
34	404 / 36	Dennis J. Burnside Jr., et al	F112 / 1123	16.30
33	404 / 37	Larry & Rebecca Myers	WB146/1089	18.10
32	404 / 54	1-1-1-1-0545 844	798 / 235	1.35
31	404 / 55.3	Jackson Lodge 35 A.F. & A.M.	1032 / 1061	1.79
29	404 / 55.11	Larry & Rebecca Myers	WB146/1089	54.74
28	2003 / 14	Ernest D. Burton	1558 / 413	3.81
27	2003 / 14.2	Billy & Sarah Garrett	1491 / 531	0.59
26	2003 / 43	Jack Ewart, et ux Living Trust	1557 / 1005	0.25
12.00	2003 / 41	The state of the s	.301 . 1000	0.29
25	2003 / 42	Patricla Ann Highland	1478 / 216	0.28
24	2003 / 44 424 / 10	Joseph H. Mason & Dedire Mason Brown	WB119/1137	22.25
22	405 / 75	William Michael McDonald	1377 / 99	202.18
21	424 / 11.1	Eric A. & Alana N. Burnside	1365 / 1089	13.92
20	425/2	Lonzo A. & Erica Martin	1569 / 1076	5.035
19	425/1	Joel B. Shuman, et al	WB166/472	89.00
18	424 / 31	Chris & Misty Montgomery	1449 / 358	15.30
17	424 / 32	Chad W. Johnson	1461 / 22	0.98
16	425 / 33	David A. & Julia Keesucker Shawn & Ashley B. SanJulian	1262 / 81 1512 / 978	34.70 5.90
15	425 / 33.5 425 / 32	Terri L. Winters	1448 / 74	2.00
14	425 / 33.3	TOTAL TYTHOGO	1110112	2.00
13	425 / 33.2	Earl Milton Jenkins	1285 / 521	2.00
1000	425 / 33.1		100000000000000000000000000000000000000	2.00
12	425 / 33.4	David J. & Angeena K. Keesucker	1439 / 457	3.01
11	424/11	Gary L. & Amy Cross	1555 / 1018	1,63
10	425 / 31.3	Gary S. & Melinda M. Brodwater Robert J. Brightbill	1354 / 175 1560 / 293	2.00
8	424 / 52.1 424 / 52.2	David Keesucker	1533 / 1283	2.38
7	424 / 52.2	Bernice A. Keesucker	1186 / 552	2.17
6	425 / 31.1	Dona R. & David R. Scarff	1360 / 652	1.00
5	425 / 31.2	Linda & William W. Brodwater III	1343 / 1279	1.16
4	445/1	production and the second	-1-	87.78
3	445 / 10	Lisa M. Nutter	WB 687 /	66.87
2	445/2	Clarks & ARRIVAN AV. Proc. Acceptant III	445	84.57
1	425 / 31	Linda & William W. Brodwater III	1410 / 1045	247.84

FILE NO: 195-36-G-18

DRAWING NO: 1208 N-3H Well Plat

SCALE: 1" = 1500'

MINIMUM DEGREE OF ACCURACY:
Submeter

PROVEN SOURCE OF ELEVATION:

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

CORS, Bridgeport, WV		STATE COUNTY PERMIT
WELL TYPE: ☐ OIL ☒ GAS ☐ LIQUID INJECTION : ☐ STORAGE ☐		AL
LOCATION: ELEVATION: 1,149' WATERSHED: Middle W	Vest Fork Creek	QUADRANGLE: West Milford
DISTRICT: Grant / Union		COUNTY: Harrison
SURFACE OWNER: Linda & William W. Brodwater III		ACREAGE: 200
ROYALTY OWNER: Leeman B. Maxwell Heirs, et al	LEASE NO:	ACREAGE: 247.84
PROPOSED WORK: MIDRILL CONVERT CONTROL DRILL D	CAL CHANGE IN WELL (SE	PECIFY) 7,050' TVD
☐ PLUG AND ABANDON ☐ CLEAN OUT AND REPLUG	TARGET FORMATION: M	arcellus Shale ESTIMATED DEPTH: 19,082' MD
WELL OPERATOR: HG Energy II Appalachia, LLC	DESIGNATED AGENT:	Diane C. White
ADDRESS: 5260 Dupont Road	ADDRESS:	5260 Dupont Road
Parkersburg, WV 26101		Parkersburg, WV 26101

WW-6A1 (5/13)

Operator's	Well No.	Nutter 1208 N-3H

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE Chapter 22, Article 6A, Section 5(a)(5) IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that -

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or				
Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page

See Attached

Acknowledgement of Possible Permitting/Approval In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

WV Division of Water and Waste Management

WV Division of Natural Resources WV Division of Highways

U.S. Army Corps of Engineers

- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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FEB 2 2 2019

WV Department of

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be accounted by the control of the permits/approvals that may be accounted by the control of the c nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:	HG Energy II Appalachia, LLC				
By:	Diane White	Diane White			
Its:	Agent				

	LEGACY LEASE							
TRACT #	NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PA
				NATHAN POST ET AL	RESERVE GAS COMPANY	NOT LESS THAN 1/8	179	
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	MERGER/NAME CHANGE	508	
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	
			ŀ	CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51 58	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE MERGER/NAME CHANGE	1325	
/	4 1			DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC. DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1427	
. /	1.001.4307	17-12-0425-0031-0003	Q101051000	DOMINION TRANSMISSION, INC. DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	
6 ↓	LC014207	17-12-425-0031-0000	Q101051000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	
			İ	DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	wvsos	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	
			•	J.B. GUSMAN AND ADALINE GUSMAN	TREAT AND CRAWFORD	NOT LESS THAN 1/8	158	
				TREAT AND CRAWFORD	UNITED FUEL GAS COMPANY	ASSIGNMENT	226	
				UNITED FUEL GAS COMPANY	FAYETTE COUNTY GAS COMPANY	ASSIGNMENT	UNRECORDED	
				FAYETTE COUNTY GAS COMPANY	HOPE NATURAL GAS	ASSIGNMENT	201	
		17-20-0444-0011-0000,				MERGER/NAME CHANGE	903	
		17-20-0444-0011-0001, 17-20-0444-0011-0002,		HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY COMPANY		1136	
			· •	CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT		
		17-20-0444-0011-0003,	İ	CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	
		17-20-0444-0012-0000,	1	CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	
		17-12-0444-0013-0000, 17-12-0444-0014-0000,		DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1409	
1	FK020606	17-12-0444-0021-0000,	Q100370000	DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1442	
- ~	1 11025555	17-12-0444-0021-0001,		DOMINION EXPLORATION & PRODUCTION, INC.	DOMINION TRANSMISSION, INC.	ASSIGNMENT	1457	
		17-12-0444-0022-0000,				MEMORANDUM FARMOUT AGREEMENT	1522	
		17-12-0445-0001-0000,	1	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC		1543	
		17-12-0445-0002-0000, 17-12-0445-0009-0000,		CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC.	NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%)	1543	
	Office	17-12-0445-0010-0000, 17-12-0445-0011-0000		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	
1.1	RE			NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	
69	RECEIVED			DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF	wvsos	
* ~ \	and VED			DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601	
019	G	17-12-0424-0052-0000		L. BASSELL MAXWELL AND BLONDA MAXWELL, HIS WIFE; AND, JANE N	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	745	
ر ح	ias	17-12-0424-0052-0001		HENDERSON, WIDOW HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	
	"	17-12-0424-0052-0002		CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	
ہے		17-12-0424-0052-0003		CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	
	1	17-12-0424-0052-0004		CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	
		p/o 17-12-0425-0031-0000		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	1522	
2	FK065462	p/o 17-12-0425-0031-0003	Q101063000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	
		17-12-0425-0032-0000		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	L

~ !ı			b10 11-15-0452-0022-0000	ı	COUNT CAS COLUMNIA II C	NODE FAITDCY INC	ASSIGNMENT	1584	94
			17-12-0425-0033-0001		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1600	66
n			17-12-0425-0033-0002	i	NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	
			17-12-0425-0033-0003	1	NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	wvsos	
5			p/o 17-12-0425-0033-0004		DOMINION TRANSIVISSION, INC.	DOWNNON ENERGY TRANSMISSION, INC.	SECOND AMENDMENT TO MEMORANDUM OF	111111111111111111111111111111111111111	
65			17-12-0425-0033-0005		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601	. 58
γ				İ	CLAUDIA HACKER ET AL	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	820	50
3					HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	17
Щ				1	CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	25
`	/			1	CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	. 79
	/			1	CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	36
	J,				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	1522	3
	5	FK068504	17-12-0424-0031-0000	Q100450000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	124
					DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	12
					CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	94
					NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	66
		1			NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	69
					DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	wvsos	
				1	DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601	. 58
					BOWINION ENERGY TRANSPOSSION, INC.	THE EMERICAL TRAINING EEG			
					REBECCA F. REED ET AL	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	822	2 8
					HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	17
- 1				1	HOPE INATURAL GAS CONFANT	CONSOLIDATED CAS SOFT ET COM ONATION	menoely want of a area		
				1	CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	25
- [CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	79
ŀ					CONSOCIDATED GAS TRANSIVISSION CORFORATION	CNO TIGATISMISSION CONFORMATION	MENOCHY WINE OF WINE		
ŀ					CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	36
	/		17-12-0425-0002-0000		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	1522	2 5
	5 3	FK068583	17-12-0425-0002-0002	Q100571000	CALV CAS COMPANIVI I C	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	124
	•		17-12-0425-0002-0001 17-12-0425-0001-0000		CNX GAS COMPANY LLC	NOBLE EIVERGT, INC.	EMITED FARTIAL ASSISTMENT (SON)	10.10	
			<u> </u>		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	17
					CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	94
m			·		500 50 50 50 50 50 50 50 50 50 50 50 50				
ž /		Q			NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	66
WV Department of nvironmental Protection	- 	R Office			NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	69
ヺロ		유			HOBEL ENERGY, INC.	THE ENERGY HAND TO HAND EAST			
98	8	RECEIVE se of Oil ar			DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
tal	ి	₩ ₩					SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	L 58
203		<u> В п</u>			DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC		822	
일을	2019	<u>a</u> 0			REBECCA F. REED ET AL	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8 MERGER/NAME CHANGE	903	
80	9	က္ဆ	1		HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	
허~		ဖ	1		CONSOLIDATED GAS SOPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	
[څ			İ		CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	
			17-13-0435 0003 0000	i	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	1522	
			17-12-0425-0002-0000 17-12-0425-0002-0002		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	
- 1	ار 10	FK068583	17-12-0425-0002-0002	Q100571000	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	
	a		17-12-0425-0001-0000	1	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	1 94

				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	16	,00
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	16	i00
			1	DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	wvsos	
			1	DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	16	501
				DAVID SCOTT ET AL	JOHN ROY	NOT LESS THAN 1/8		118
	1				FEDERAL OIL COMPANY	ASSIGNMENT (7/8iNT.)		118
	1			JOHN ROY AND MARY S. ROY JOHN ROY AND MARY S. ROY	FEDERAL OIL COMPANY	ASSIGNMENT (1/8iNT.)		119
	1			FEDERAL OIL COMPANY	T.N. BARNSDALL	ASSIGNMENT		133
								235
				T.N. BARNSDALL, SOUTHER OIL COMPANY, FRED S. RICH, W.S. MORRIS		ASSIGNMENT		132
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT MERGER/NAME CHANGE		508
į			ł	RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY			903
- 1				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE		136
- 1		`		CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT		51
- 1		17-12-0424-0011-0000		CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE		58
11	FK045313	17-12-0424-0011-0001	Q100261000	CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE		
	1			DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	MERGER/NAME CHANGE		325
	1			DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	14	427 522
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT		
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)		543
		3		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	15	584
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT		_
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT		600 600
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT		100
		i		DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF	wvsos	+
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	16	
				JOSEPH CHEUVRONT ET AL	P. H. GAFFNEY	NOT LESS THAN 1/8	1	184
				F.E. WILLIAMSON AND P.H GAFFNEY, DBA F.E. WILLIAMSON & CO.	J.F. DONALDSON	ASSIGNMENT	2	222
				J. F. DONALDSON	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	2	222
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPNAY	ASSIGNMENT	2	236
	į			PITTSBURGH AND WEST VIRGINA GAS COMPNAY, PHILADELPHIA OIL			ŀ	- 1
				COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT/BENSON SAND AND ABOVE	5	504
				PITTSBURGH AND WEST VIRGINA GAS COMPNAY, PHILADELPHIA OIL COMPANY	EQUIATABLE GAS COMPANY	ASSIGNMENT	7	714
	l			EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT/BELOW BENSON SAND	7	790
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	9	903
i				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	11	136
14	LC052212	17-12-0405-0075	Q100524000	CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE		51
7				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE		58
	1	1	1	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	15	22ز
	1		1	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	15	543
	1		1	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	15	576
	1	1		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	15	584
	1_	1	1	NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	16	600
	♀	l .	1	NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	16	600
	office R			DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	wvsos	-
2 23	ECEIV of Oil a			DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT		601
<u></u>	nd ED			GEO W WASHBURN ET AL	RESERVE GAS COMPANY	NOT LESS THAN 1/8		179
28				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	MERGER/NAME CHANGE		508
C	Ga			HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE		903
	ω			CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT		136
	I			CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE		51
	1	1	1	CNG TRANSMISSION CORPORATION	EMAX OIL COMPANY	WELLBORE ASSIGNMENT	12	261

1208N 3H Page 3

1	I	1		IEMAX OIL COMPANY	CABOT OI AND GAS CORPORATION	COUNTERPART ASSIGNMENT	1244	755
18	LC052900	17-20-0404-0055-0000 17-	Q101130000	CABOT OIL AND GS CORPORATION	ENERVEST APPALACHIA L.P.	CONVEYANCE	1314	1012
		20-0404-0055-0001	•	CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	wvsos	
						SECOND AMENDMENT TO MEMORANDUM OF	1	
1				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1621	1295
				LARA BETH RAMSBURG	HG ENERGY II APPALACHIA LLC	NOT LESS THAN 1/8	1615	673
Į.				CAROLYN S.J. HOOVER	HG ENERGY II APPALACHIA LLC	NOT LESS THAN 1/8	1615	680
1				JOE LAW	HG ENERGY II APPALACHIA LLC	MINERAL DEED	1606	779
				LLOYD WASHBURN ET AL	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	1443	0975
ŀ				SOUTH PENN OIL COMPANY	RESERVE GAS COMPANY	ASSIGNMENT	215	351
ŀ				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	MERGER/NAME CHANGE	WVSOS	
ŀ				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	179
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
		47 00 0404 0007 0000		CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
		17-20-0404-0037-0000		CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
1	FKOEGOEF	17-20-0404-0036-0000	040404000	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
19	FK052855	17-20-0404-0035-0000	Q101019000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1245
I		17-20-0404-0034-0000, 17-20-2901-		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
		0100-000 ET AL		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
1				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	wvsos	
						SECOND AMENDMENT TO MEMORANDUM OF	'	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601	581

WV Descriment of Environment

RECEIVED
Office of Oil and Gas
FER 29 2019





February 11, 2019

Laura Adkins WV DEP Division of Oil & Gas 601 57th Street Charleston, WV 25304

RE:

Drilling Under Roads - Nutter 1208 N-3H

Union District, Harrison County

West Virginia

Dear Ms. Adkins:

HG Energy II Appalachia, LLC, has the right to drill, stimulate and produce wells that are drilled under the County and State Roads as designated on the plats.

Should you have any questions or desire further information, please contact me at dwhite@hgenergyllc.com or 304-420-1119.

Very truly yours,

Diane White

Diane C. White

Enclosures

RECEIVED
Office of Oil and Gas

FEB 2 2 2019

WV Department of Environmental Protection

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS **NOTICE CERTIFICATION**

Date of Notic	ce Certification: 02/15/2019		API No. 47			
				Well No. Nutt		
		•	Well Pad N	ame: Nutter	Well Pad	
Notice has b	oeen given:		•			
Pursuant to th	e provisions in West Virginia Code §	22-6A, the Operator has provi	ded the req	uired parties	with the Notice Forms listed	
	tract of land as follows:					
State:	West Virginia		Easting:	549741.2		
County:	Harrison		Northing:	4333955.3		
District:	Grant	Public Road Acces	-	SR 19		
Quadrangle:	West Milford	Generally used far	m name:	Nutter		
Watershed:	Middle West Fork Creek					
information re of giving the requirements Virginia Code	ed the owners of the surface described equired by subsections (b) and (c), see surface owner notice of entry to surface of subsection (b), section sixteen of \$22-6A-11(b), the applicant shall thave been completed by the applicant	ction sixteen of this article; (ii) rvey pursuant to subsection (a f this article were waived in vender proof of and certify to the	that the red), section to vriting by	quirement was en of this art the surface o	s deemed satisfied as a result icle six-a; or (iii) the notice wner; and Pursuant to West	
that the Ope	West Virginia Code § 22-6A, the Oprator has properly served the require ECK ALL THAT APPLY		s Notice C	ertification	OOG OFFICE USE ONLY	
☐ 1. NO	TICE OF SEISMIC ACTIVITY or	■ NOTICE NOT REQUIRE SEISMIC ACTIVITY WAS			☐ RECEIVED/ NOT REQUIRED	
■ 2. NO	TICE OF ENTRY FOR PLAT SURV	YEY or D NO PLAT SURVE	Y WAS CO	ONDUCTED	☐ RECEIVED	
■ 3. NO	TICE OF INTENT TO DRILL or	NOTICE NOT REQUIRED NOTICE OF ENTRY FOR PER WAS CONDUCTED or			☐ RECEIVED/ NOT REQUIRED	
		☐ WRITTEN WAIVER B' (PLEASE ATTACH)	Y SURFA	CE OWNER		
■ 4. NO	TICE OF PLANNED OPERATION	RECEIVED Office of Oil and Ga	ıs		☐ RECEIVED	
■ 5. PUE	BLIC NOTICE	_	· ·		□ RECEIVED	
■ 6. NO	TICE OF APPLICATION	FEB 2 2 2019	_		☐ RECEIVED	
		WV Department C	of ction			

Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

Its:

Telephone:



Certification of Notice is hereby given:

FEB 2 2 2019

Well Operator:	HG II Appalachia, LLC Diane White Diane Wh	Address: 5260 Dupont Road	
in this Notice obtaining the in	Certification and all attack formation, I believe that the	ments, and that based on my inquiry of those individuals in information is true, accurate and complete. I am aware that the possibility of fine and imprisonment.	nmediately responsible for
above, to the re	equired parties through per-	onal service, by registered mail or by any method of deliver lty of law that I have personally examined and am familiar with	y that requires a receipt or
6A. I certify that	at as required under West \	irginia Code § 22-6A, I have served the attached copies of the	ne Notice Forms, identified

Facsimile:

Email:

304-863-3172

dwhite@hgenergyllc.com

NOTARY SEAL
OFFICIAL SEAL NOTARY PUBLIC. STATE OF WEST VIRGINIA MARK J SCHALL H G Energy L L C PO 80x 5519, Vierna, WV 26105 My Commission Expires November 2, 2021

Agent

304-420-1119

Subscribed and sworn before me this 15th day of F	ebruary, 2019
Gille	Notary Public
My Commission Expires 11/2/2021	

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

WW-6A (9-13) API NO. 47-OPERATOR WELL NO. Nutter 1208 N-3H
Well Pad Name: Nutter 1208

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF APPLICATION

Notice Time Requirement: notice shall be provided no later than the filing date of permit application. Date of Notice: 02/15/19 Date Permit Application Filed: 02/21/19 Notice of: RECEIVED Office of Oil and Gas ☐ CERTIFICATE OF APPROVAL FOR THE PERMIT FOR ANY WELL WORK CONSTRUCTION OF AN IMPOUNDMENT OR PIT FEB 2 2 2019 Delivery method pursuant to West Virginia Code § 22-6A-10(b) WV Department of METHOD OF DELIVERY THAT REQUIRES A Environmental Protection ☐ REGISTERED ☐ PERSONAL RECEIPT OR SIGNATURE CONFIRMATION **SERVICE** MAIL Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule. RECEIVED Office of Oil and Gas ☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice ☑ Well Plat Notice is hereby provided to: COAL OWNER OR LESSEE FEP 2 9 2019 SURFACE OWNER(s) Name: Lisa M. Nutter (Surface and Surface Road) Name: Address: WV Department of Environmental Protection Address: 382 Hidden Valley Road Jane Lew, WV 26378 □ COAL OPERATOR William W. & Linda Broadwater (Surface & Water Well) Name: Address: 132 Praise Lane Name: Jane Lew, WV 26378 Address: SURFACE OWNER(s) (Road and/or Other Disturbance) M SURFACE OWNER OF WATER WELL Address: AND/OR WATER PURVEYOR(s) William & Connie Thomaschek Name: Address: 40 Praise Lane Name: Jane Lew, WV 26378 Address: ☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD ☐ SURFACE OWNER(s) (Impoundments or Pits) Dominion Energy Transmission - Attn: Ronald Waldren Name: Address: 925 White Oaks Blvd Name: Bridgeport, WV 26330 Address: *Please attach additional forms if necessary

WW-6A (8-13)

4703305952

OPERATOR WELL NO. Nutter 1208 N-3H

Well Pad Name: Nutter 1208

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wy.gov/oiland-gas/pages/default.aspx. Office of Oil and Gas.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural or buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

WW-6A (8-13) Well Pad Name: Nutter 1208

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas Department of Environmental Protection 601 57th St. SE Charleston, WV 25304 (304) 926-0450 FEB 2 2 2019

WV Department of Environmental Protection

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WW-6A (8-13)

API NO. 47- - 05/10/201
OPERATOR WELL NO. Nutter 1208 N-3H
Well Pad Name: Nutter 1208

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have THIRTY (30) DAYS after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Office of Oil and Gas.

FER 20 2019

WV Department of Environmental Protection WW-6A (8-13)

API NO. 47-OPERATOR WELL NO. Nutter 1208

Well Pad Name: Nutter 1208

Notice is hereby given by:

Well Operator: HG Energy II Appalachia, LLC

304-420-1119 Telephone:

dwhite@hgenergyllc.com Email:

Address: 5260 Dupont Road

Parkersburg, WV 26101

Facsimile: 304-863-2172

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

Diane White

OFFICIAL SEAL NOTARY PUBLIC. STATE OF WEST VIRGINIA MARK J SCHALL H G Energy LLC PO Box 5519, Vienna, WV 26105 My Commission Expires November 2, 2021

Subscribed and sworn before me this 15th day of February, 2019

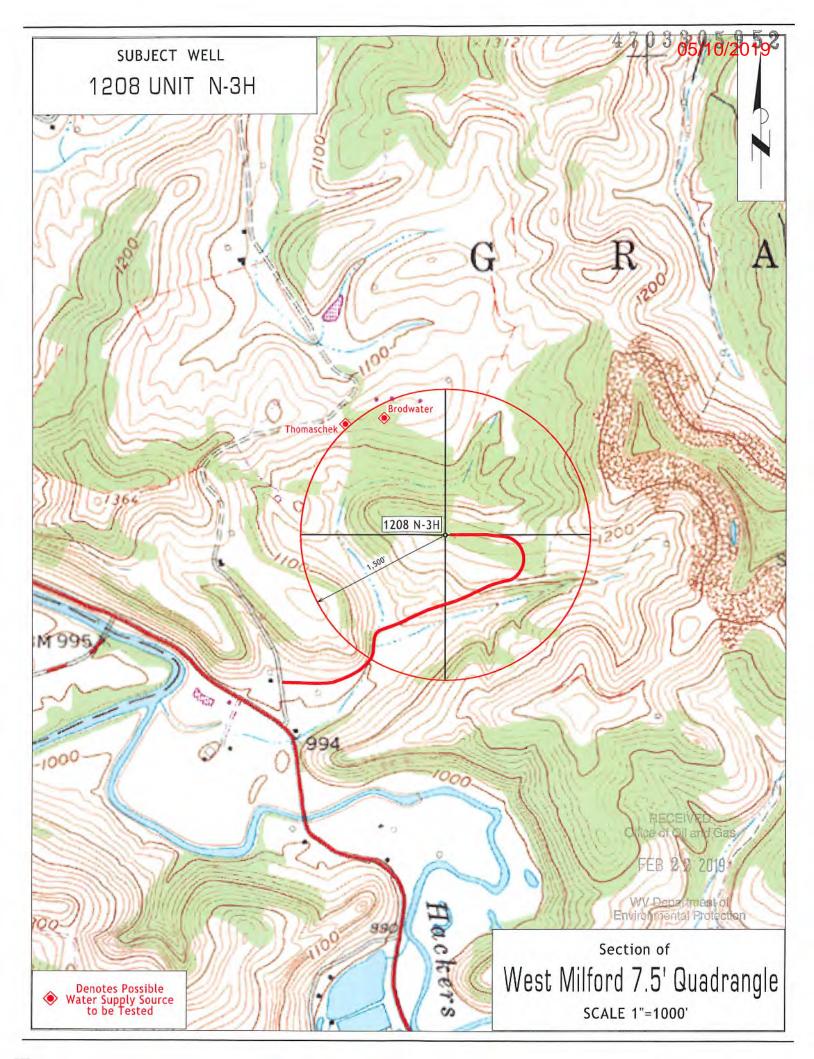
Notary Public

My Commission Expires

RECEIVED Office of Oil and Gas

FEB 2 2 2019

WV Department of Environmental Protection



Diane White

From:

Diane White

Sent:

Monday, November 26, 2018 5:02 PM

To: Subject: Vickie Hoops (vhoops@sturmenvironmental.com)
Pre Drill Water Testing for the Nutter 1208 Well Pad

Vicki, Good afternoon. We need to have two possible water sources tested if the surface owners will allow it.

Nutter 1208 Well Pad, Harrison County, Grant District, West Milford WV 7.5' Quadrangle, Middle West Fork Creek Watershed, LAT/LONG (DD NAD 83) – 39.153300, -80.424351

- 1 William & Connie Thomaschek, 40 Praise Lane, Jane Lew, WV 26378
- 2 William & Linda Broadwater, 132 Praise Lane, Jane Lew, WV 26378 304-884-6406

Please ask the Technician to identify the testing sheets with Nutter 1208 Well Pad please. Thank You, Diane

Diane C. White



HG Energy, LLC 5260 Dupont Road Parkersburg, WV 26101 304-420-1119 (0) 304-482-0108 (C) dwhite@hgenergyllc.com

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RECEIVED
Office of Oil and Gas

onmental

JOHN W. STURM, PRESIDENT

COMPANY: H.G. ENERGY, LLC.

DATE/TIME SAMPLED: 11-29-18 1115

SAMPLE ID:

WILLIAM THOMASCHECK

DATE/TIME RECEIVED: 11-29-18 1232

NUTTER 1208 PAD SAMPLED BY: K. WILLIAMS

LABORATORY ID:

HG 181129-1

PARAMETER	TEST RESULTS	UNITS	METHOD	METHOD DETECTION LIMIT	DATE/TIME ANALYZED	ANALYST
FIELD pH	7.3	units			11-29-18 1115	KW
FIELD TEMP	21.5	°C			11-29-18 1115	KW
FIELD COND	480	μmhos			11-29-18 1115	KW
LATTITUDE	39°09°23.81"	N			11-29-18 1115	KW
LONGITUDE	80°25'38.03"	w			11-29-18 1115	KW
pH O	7.3	units	SM 22 nd 4500 H B	.1	11-30-18 0912	KH
Fe	U	mg/L	EPA 200.7 Rev 4.4-1994	.02	12-01-18 0657	DB
TDS	247	mg/L	USGS 1-1750-85	4	12-03-18 1400	MRS
Ct-	10.3	mg/L	EPA 300.0 Rev 2.1-1993	,50	12-05-18 0552	DC
MBAS	U	mg/L	SM22 ^{ml} 5540C	.01	11-30-18 2136	sw
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*Client Provided

**See Attached. The following results meet or exceed requirements and standards set forth by the certifying authority except where noted. Data Qualifiers

- Analyte found in reagent blank. Indicates possible reagent or background contamination. Estimated Reported value exceeded calibration range.
- E
- Reported value is an estimate because concentration is less than reporting limit.
- PND Precision not determined.
- Sample results rejected because of gross deficiencies in QC or method performance. Re-sampling and/or re-analysis is necessary.
- RND Recovery not determined.
- Compound was analyzed for, but not detected.
- Out of holding. Time does not meet 40 CFR 136/141 compliance.
- O This result is not supported by our certification ID. Does not meet 40 CFR 136/141 compliance. Does not meet 47 CSR 32 compliance.
- A

Norrative:

Approved Dorth 11 Boots

MAIN OFFICE AND LABORATORY-POST OFFICE BOX 650 . BRIDGEPORT, WEST VIRGINIA 26330 . (304) 623-6549 CHARLESTON FIELD OFFICE—POST OFFICE BOX 8337 . SOUTH CHARLESTON, WEST VIRGINIA 25303-0337 . (304) 744-9864

nvironmental

JOHN W. STURM, PRESIDENT

COMPANY:

H.G. ENERGY, LLC.

DATE/TIME SAMPLED:

11-29-18 1125

SAMPLE ID:

WILLIAM BROADWATERS

DATE/TIME RECEIVED: 11-29-18 1232

NUTTER 1208 PAD SAMPLED BY: K. WILLIAMS

LABORATORY ID:

HG 181129-2

PARAMETER	TEST RESULTS	UNITS	METHOD	METHOD DETECTION LIMIT	DATE/TIME ANALYZED	ANALYST
FIELD pH	7.8	units			11-29-18 1125	KW
FIELD TEMP	24.8	° C			11-29-18 1125	KW
FIELD COND	420	μmhos			11-29-18 1125	KW
LATTITUDE	39°09'24.84"	N			11-29-18 1125	KW
LONGITUDE	80°25'31.97"	w			11-29-18 1125	KW
pH O	7.6	units	SM 22 nd 4500 H B	.1	11-30-18 0912	KH
Fe	.13 J	mg/L	EPA 200.7 Rev 4.4-1994	.02	12-01-18 0657	DB
TDS	218	mg/L	USGS I-1750-85	4	12-03-18 1400	MRS
Cl-	3,60	mg/L	EPA 300.0 Rev 2.1-1993	.50	12-05-18 0552	DÇ
MBAS	.02	mg/L	SM22 nd 5540C	.01	11-30-18 2136	sw
 						

*Client Provided

See Attached. The following results meet or exceed requirements and standards set forth by the certifying authority except where noted. **Data Qualifiers

Analyte found in reagent blank, indicates possible reagent or background contamination.

E Estimated Reported value exceeded calibration range.

Reported value is an estimate because concentration is less than reporting limit.

PND Precision not determined.

Sample results rejected because of gross deficiencies in QC or method performance. Re-sampling and/or re-analysis is necessary.

R RND Recovery not determined.

Compound was analyzed for, but not detected.

Out of holding. Time does not meet 40 CFR 136/141 compliance.

ÖŢ This result is not supported by our certification ID. Does not meet 40 CFR 136/141 compliance.

Does not meet 47 CSR 32 compliance.

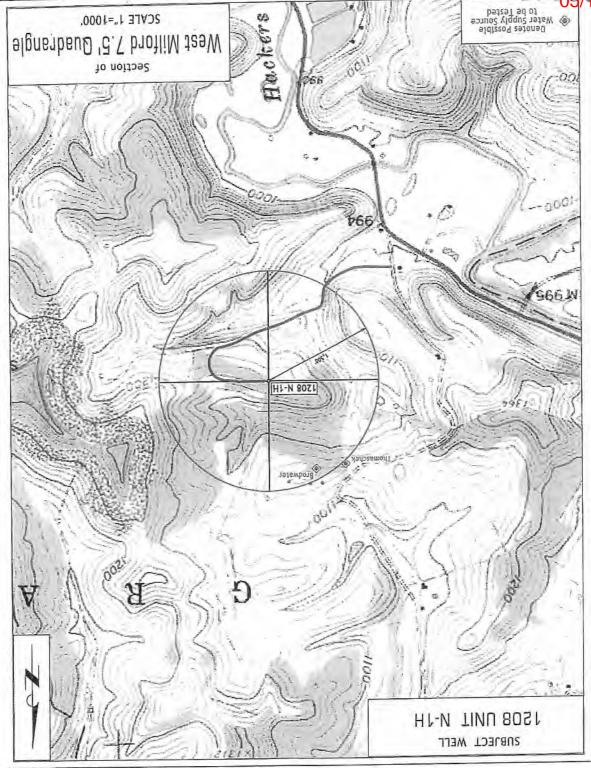
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Dorph H Bost

MAIN OFFICE NO LABORATORY—POST OFFICE BOX 650 • BRIDGEPORT, WEST VIRGINIA 26330 • (304) 623-6549
CHARLESTON FIELD OFFICE—POST OFFICE BOX 8337 • SOUTH CHARLESTON, WEST VIRGINIA 25303-0337 • (304) 744-9864

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WW-6A3 (1/12)

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF ENTRY FOR PLAT SURVEY

	Requirement: Notice shall be pro	vided at least SEVEN (7) days but no more than FORTY-FIVE (45) days prior to
entry Date of Notice	e: 02/05/2019 Date of Pla	nned Entry: 02/13/2019
Delivery metl	hod pursuant to West Virginia	Code § 22-6A-10a
☐ PERSON	NAL	■ METHOD OF DELIVERY THAT REQUIRES A
SERVIC	E MAIL	RECEIPT OR SIGNATURE CONFIRMATION
on to the surfa but no more the beneath such to owner of mine and Sediment Secretary, while enable the surfa-	the tract to conduct any plat survey an forty-five days prior to such express that has filed a declaration pure rals underlying such tract in the control Manual and the statutes and the statement shall include contact face owner to obtain copies from the	Prior to filing a permit application, the operator shall provide notice of planned entry is required pursuant to this article. Such notice shall be provided at least seven days attry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams resuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any ounty tax records. The notice shall include a statement that copies of the state Erosion and rules related to oil and gas exploration and production may be obtained from the information, including the address for a web page on the Secretary's web site, to the secretary.
	by provided to:	☐ COAL OWNER OR LESSEE
SURFAC Name: Lisa	• • • • • • • • • • • • • • • • • • • •	
Name: Lisa N Address: 382 H		Name: NA Address:
	Lew, WV 26378	
Name: William	m W. & Linda Broadwater	
Address: 132 P		■ MINERAL OWNER(s)
	Lew, WV 26376	Name: **See Attached List **
		Address:
		*please attach additional forms if necessary
a plat survey o		notice is hereby given that the undersigned well operator is planning entry to conduct
State:	West Virginia	Approx. Latitude & Longitude: 39.153380 / -80.424323
County: District:	Harrison	Public Road Access: SR 19 Watershed: Middle West Fork Creek
	Grant West Milford, WV 7.5'	Watershed: Middle West Fork Creek Generally used farm name: Nutter
Quadrangie.	vvest wintord, vv v 7.5	Concrany used farm name.
may be obtaine Charleston, W	ed from the Secretary, at the WV 25304 (304-926-0450). Copie	ol Manual and the statutes and rules related to oil and gas exploration and production Department of Environmental Protection headquarters, located at 601 57 th Street, SE, sof such documents or additional information related to horizontal drilling may be b.wv.gov/oil-and-gas/pages/default.aspx.
Natice is her	eby given by:	
Well Operator:		Address: 5260 Dupont Road
Telephone:	304-420-1119	Parkersburg, WV 26101
Email:	dwhite@hgenergylic.com	Facsimile: 304-863-3172

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

<u>WW-6A3</u> (1-12)

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Page 1 Continued

Mineral Owners

Adam Lee Carder 58 Washburn St Lost creek, WV 26385

Amy Geraldine Brown 258B Brown Rd Jane Lew, WV 26378

Ann Covington J 1401 Torrey Pines Dr Columbia, MO 65203-4825

Argent Company, Agent for Charles L Maxwell 621 N. Robinson Suite 100 Oklahoma City, OK 73102

Argent Company,
Agent for Deborah Bell Meyer/
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company, Agent for Jane R. Gray Koubek and Terry Dean Koubek 621 N. Robinson Suite 100 Oklahoma City, OK 7310

Argent Company, Agent for Mary Virginia Gray Trust 621 N. Robinson Suite 100 Oklahoma City, OK 73102

Argent Company, Agent for Piala Living Trust 621 N. Robinson Suite 100 Oklahoma City, OK 73102 Amber Campbell 245 Washburn Street Lost Creek, WV 26385

Amy M. Blankenship 1908 Huber Rd Charleston, WV 25314

Annette C. Nichols

RR 1 Box 124

Lost Creek, WV 26385-9721

Argent Company,
Agent for David Maxwell Gray /
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company,
Agent for Donna Frumentoy
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company, Agent for Joseph L Maxwell 621 N. Robinson Suite 100 Oklahoma City, OK 73102

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Argent Company, for Pamela Jane Bell Revocable Trust 621 N. Robinson Suite 100 Oklahoma City, OK 73102

Argent Company,
Agent for Robert Nimorwicz
621 N. Robinson Suite 100
Oklahoma City, OK 73102

WV Department of Environmental Protection

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Page 1 Continued

Mineral Owners

Argent Company,
Agent for Steven L Maxwell
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Bernard J. Burns III 1300 S. Barton St, #341 Arlington, VA 22204

Bradford Cottrill & Ncholas Cottrill 116 Washington Drive Lost Creek, WV 26385

Buckner W. Hornor 486 Irish Hill Rd Hopkinton, NH 03229-2202

Charles E. Steffich RR 1 Box 132 Lost Creek, WV 26385

Chester Lee Burnside 136 Redstone Church Ad Fayette City, PA 15438

Chun H. Underwood RR 1 Box 130B Lost Creek, WV 26385

Dawn Marie Posey 2184 Jennings Run Rd Weston, WV 26452

Dennis J. Burnside, Jr./ 265 Fenton Pl Clarksburg, WV 26301 Argent Company, /
Agent for Susan Brown Yunker
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Billie Jean Sandy 113 Euclid Ave Clarksburg, WV 26301

Brian L. Rhoades

165 Fowler Rd

Jane Lew, WV 26385

Carleton David Lloyd 1505 Weatherford Dr Sun City Center, FL 33573

Charles Henry Burnside (CHARLES HENRY GRANDSON) 867 MIDDLETOWN RD Shinnston, WV 26431

Christine Rae Hall 117 South ST Bluffton, SC 29910

Darren Gail Buynside 217 Clay Street Hambleton, WV 26269

Deborah Nay Stutler 9967 WV Route 18S New Milton, WV 26411

Diane Burnside West, by her POA, William Holmes West 40 Fenton Place Clarksburg, WV 26301 RECEIVED
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Page 1 Continued

Mineral Owners

Dixie L. Quickle
RR 1 Box 138C
Lost Creek, WV 26385

Donald R. Wilson / 212 NE 56th St Oak Island, NC 28465-4919

Duane Burnside / 5870 Heartwood Ct Harrisburg, NC 28075-7594

Elaine Sue Dixon 1848 Green Ave Clarksburg, WV 26301

Eugene B Ward Jr & **d**ary Michael Ward 10 New England Court Fairmont, WV 26554

Floyd J. Burnside, 187 Dyke St. Big Sandy, TN 38221

Gregory G. Burnside 504 Long Run Rd Lost Creek, WV 26385

Hiram Gene Burnside P.O. Box 8044 Nutter Fort, WV 26302 Donald L. & Karen Sinclair (Life Estate)
ML Sinclair & Cole R Sinclair Remainderman
408 Michigan Ave
Nutter Fort, WV 26301

Donna Hefley Tucker 628 Hwy 77 South Davis, OK 73030

Edna Alexander 1806 Artisan Ave Huntington, WV 25703

Elizabeth A Beveridge 243 Shady Lane / Alma, WV 26320

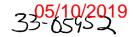
Evelyn Ruth Premoshis 855 Fayete City Rd Fayette City, PA 15438

Gina Burnside 42723 Cool Breeze Square Leesburg, VA 20176

Heirs of John W. Toothman, their Successors and/or Assigns 84 Washburn St Lost Creek, WV 26385

Hylan Calcerag6 1520 N. Franklin Blvd Pleasantville, NJ 08232

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Page 1 Continued

Mineral Owners

Iden Scott McWhorter 1661 LaFrance St NE, Unit 314 Altlanta, GA 30307

James R. Kettering Jr. / PO Box 511 Fairmont, WV 26555-0511

Jane M Hardin 225 Watchung FRK Westfield, NJ 07090

Jeanne Jones Beck 129 W 5th St Russell, KS 67665-2716

Joe R. Law / 3814 Fairmont Ave Fairmont, WV 26554-5479

John Horner and Dreama Horner RR 2 Box 210B Jane Lew, WV 26378

John Timothy **F**urns 15 Della Lane Boonsboro, MD 21713

JP Morgan Chase Bank, Trustee Will E Morris Trust PO Box 659 Wichita Falls, TX 76307-0659 Jackson Lodge No. 35 A.F. & A.M. and Jackson Lodge No. 36 A.F. & A.M. Route 19 South
Good Hope, WV 26451

James Y. Hornor and Jean S. Hornor 5002 Esmond Lane Castle Rock, CO 80108-9027

Jane Rae May 2447 Merrigan Place Tallahassee, FL 32309

Joan Hall Rt. 2 Box 48 Stevens Run Rd. Lost Creek, WV 26385

John Henry McWhorter 5392 Duck Creek Road Lost Creek, WV 26385

John Scott Skinner 24 Washburn St Lost Creek, WV 26385

Jon S. & Wendy J 24 Washburn St Lost Creek, WV 26385

K. Rodney McCall & Charlene McCall 83 Westfall Ave / Lost Creek, WV 26385

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Page 1 Continued

Mineral Owners

Karen M Henderson / 190 Saphire Lane Meadowbrook, WV 26404

Kenneth Burnside 201 Maple View Dr Clarksburg, WV 26301

Kevin McNemar P.O. Box 534 Lumberport, WV 26385

Larry W. Myers and Rebecca E. Myers 9183 Good Hope Pike / Lost Creek, WV 26385

Lewis Wayne Davis
P.O. Box 2078
Buckhannon, WV 26201

Linda Sue Peterson 11101 Coventry Way, Unit 3/01 Tustin, CA 92782

Lynwood D. Burnside 22 Southgate Hills Dr Clarksburg, WV 26301

Martha L. Somerville 2335 Lost Creek Romines Mill Rd. Lost Creek, WV 26385

Mary Jane Lewis 146 E Main St / Clarksburg, WV 26301 Kathryn Marie Burnside Rt 1 Box 138 A / Lost Creek, WV 26385

Kenneth Scott Hall 127 South Street Bluffton, SC 29910

Kimberly A. Taylor 2 Washburn St Lost Creek, WV 26385

Leona J Skinner Auvil 222 S Maple Ave Clarksburg, WV 26301

Linda Grimes 1688 Jakes Ran Rd. Lost Creek, WV 26385

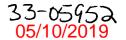
Lisa Painter 301 Devonshire Court Cranberry Township, PA 16066

Mal R. Burnside fka Richard Burnside 2349 Pattison Ave Cheyenne, WY 82009

Mary H. Balmer 619 Ohio A√e Eustis, FL 32726-5121

Mary L. Tinney (Life Estate) PL Tinner, GR Tinney, Haycox (Remainderman) 8971 Good Hope Pike Lost Creek, WV 26385

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Page 1 Continued

Mineral Owners

Michael C. Burnside 42723 Cool Breeze Square Leesburg, VA 20176

Michael Ross P.O. Box 880 Glenville, WV 26351

New Beginnings Church (Good Hope Prayer Chapel) TEdward Sears II, Pres 8901 Good Hope Pike Lost Creek, WV 26385

Okey G. Allawat 229 Washburn Street Lost Creek, WV 26385

Pamela J. Everitt 63 Washburn St Lost Creek, WV 26385

Patricia B. Craft, 7749 Church St Middletown, VA 22645

Prayer Chapel of Good Hope RR 5 Box 341 / Clarksburg, WV 26301

Rhonda J. Arrington fka Rhonda Burnside 11377 N 1720 Rd Sweetwater, OK 73666-6311 Michael K. Burnside PO BOX 582 / Kingwood, WV 26537

Mike Ross Inc
P.O. Box 219
Coalton, WV 26258-0219

Okey F. Gallien, Jr & Leatrice C. Gallien 13 Norris Ridge Road / Philippi, WV 26416

Oscar Lee Rhoades 14 Perine St Lost Creek, WV 26385

Patricia A. Bartlett Helmick 3006 City View Drive / Parkersburg, WV 26101

Paul Allen Hornor Jr. 161 Cooing Dove Drive 9/ Bridgeport, WV 26330-6749

Rebecca A. Bennett 122 Perine St Lost Creek, WV 26385

Robert D. Wilt 9057 Good Hope Pike Lost Creek, WV 26385

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Mineral Owners

Robert Dean Davis 15617 South 7th St Phoenix, AZ 85048

Roberta Smiley
2 Smiley Dr

Mechanicsburg, PA 17050

Roy McNemar 2105 Lost Creek Romines Mill Rd. Lost Creek, WV 26385

Scott Burnside 2775 Anmoore Rd. Bridgeport, WV 26330

Thomas H. Wilson 1412 Western Ave
Morgantown, WV 26505-2148

New Bethel United Methodist Church 43 Bran Acres Dr Lost Creek, WV 26385

Waco Oil & Gas Co, Inc P.O. Box 880 Glenville, WV 26351

William E. Wagner
513 Vantage Dr

Morgantown, WV 26508-2635

Robert G. Allman and Martha Allman 8937 Good Hope Pike Lost Creek, WV 26385

Ronzel C. Richards & Sandra K. Richards 86 Isaacs Creek Rd Lost Creek, WV 26385

Sabrina Burnside 55 S Main St Keyser, WV 26726

Seneca-Upshur Petroleum LLC PO Box 2048 Buckhannon, WV 26201-2048

Timothy E. and Anissa K. Davis 862 Saddletree Rd Mt. Clare, WV 26408

Virgil McNemar 2297 Lost Creek Romines Mill Rd. Lost Creek, WV 26385

William A. Burnside 5943 Jarvisville Rd Salem, WV 26426

William Michael Davis 3109 Maplelawn Ave NW Roanoke, VA 24012

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STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

Notice Time I Date of Notic	Requirement: Notice shall be procee: 02/11/2019	ovided at least T Date Permit Ap	FEN (10) days poplication Filed	prior to filing a l: 02/21/2019	permit application.
Delivery met	hod pursuant to West Virginia (Code § 22-6A-	16(b)		
□ HAND DELIVE	CERTIFIED MAI		ED		
receipt reques drilling a hori of this subsect subsection ma and if available	sted or hand delivery, give the sur- zontal well: <i>Provided</i> , That notice tion as of the date the notice was p	face owner notice given pursua provided to the face owner. Thic mail address	ice of its intent to ant to subsection surface owner: ne notice, if requ of the operator	to enter upon to n (a), section to Provided, how aired, shall incl	, an operator shall, by certified mail return he surface owner's land for the purpose of en of this article satisfies the requirements wever, That the notice requirements of this lude the name, address, telephone number, or's authorized representative.
	M. Nutter	/	Name:	William W. & Lind	a Broadwater
	Hidden Valley Road		Address:	132 Praise Lane	
	Commence of Charles Co.			Jane Lew, WV 263	78
Notice is her Pursuant to W				ne undersigned	well operator has an intent to enter upon
Notice is here Pursuant to We the surface ow State: County:	reby given: /est Virginia Code § 22-6A-16(b) vner's land for the purpose of drill West Virginia Harrison		I well on the tra UTM NAD 83	ne undersigned act of land as fo Easting: Northing:	well operator has an intent to enter upon bllows: 549741.2 4333955.3
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Notice is her Pursuant to W the surface ow State: County: District: Quadrangle: Watershed: This Notice Pursuant to W facsimile num related to hor located at 601	reby given: /est Virginia Code § 22-6A-16(b) vner's land for the purpose of drill West Virginia Harrison Grant West Milford WV 7.5' Middle West Fork Creek Shall Include: West Virginia Code § 22-6A-16(aber and electronic mail address izontal drilling may be obtained a 57th Street, SE, Charleston, WV reby given by:	(b), this notice of the operato from the Secret	UTM NAD 83 Public Road Ad Generally used shall include to and the operatory, at the WV 6-0450) or by v	ne undersigned act of land as for Easting: Northing: ccess: farm name: the name, additator's authoriz Department of isiting www.de	well operator has an intent to enter upon ollows: 549741.2 4333955.3 SR 19 Nutter ress, telephone number, and if available, ed representative. Additional information of Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx.
Notice is her Pursuant to W the surface ow State: County: District: Quadrangle: Watershed: This Notice Pursuant to W facsimile num related to hor located at 601	reby given: //est Virginia Code § 22-6A-16(b) vner's land for the purpose of drill West Virginia Harrison Grant West Milford WV 7.5' Middle West Fork Creek Shall Include: West Virginia Code § 22-6A-16(aber and electronic mail address izontal drilling may be obtained: 57th Street, SE, Charleston, WV reby given by: T: HG Energy II Appalachia, LLC	(b), this notice of the operato from the Secret	UTM NAD 83 Public Road Ad Generally used shall include to and the operatory, at the WV 6-0450) or by v	ne undersigned act of land as for Easting: Northing: ccess: I farm name: the name, additator's authoriz	well operator has an intent to enter upon ollows: 549741.2 4333955.3 SR 19 Nutter ress, telephone number, and if available, ed representative. Additional information of Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx.
Notice is her Pursuant to We the surface own State: County: District: Quadrangle: Watershed: This Notice Pursuant to We facsimile numerelated to hor located at 601 Notice is her Well Operator	reby given: /est Virginia Code § 22-6A-16(b) vner's land for the purpose of drill West Virginia Harrison Grant West Milford WV 7.5' Middle West Fork Creek Shall Include: West Virginia Code § 22-6A-16(aber and electronic mail address izontal drilling may be obtained a 57th Street, SE, Charleston, WV reby given by:	(b), this notice of the operato from the Secret	UTM NAD 83 Public Road Ad Generally used shall include to and the operatory, at the WV 6-0450) or by v	ne undersigned act of land as for Easting: Northing: ccess: farm name: the name, additator's authoriz Department of isiting www.de	well operator has an intent to enter upon ollows: 549741.2 4333955.3 SR 19 Nutter ress, telephone number, and if available, ed representative. Additional information of Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx.
Notice is her Pursuant to We the surface own State: County: District: Quadrangle: Watershed: This Notice Pursuant to We facsimile numerelated to hor located at 601 Notice is her Well Operator	reby given: /est Virginia Code § 22-6A-16(b) vner's land for the purpose of drill West Virginia Harrison Grant West Milford WV 7.5' Middle West Fork Creek Shall Include: West Virginia Code § 22-6A-16(nber and electronic mail address izontal drilling may be obtained 57th Street, SE, Charleston, WV reby given by: T: HG Energy II Appalachia, LLC 5260 Dupont Road	(b), this notice of the operato from the Secret	UTM NAD 83 Public Road Ad Generally used shall include to and the operatory, at the WV 6-0450) or by v Authorized F Address:	ne undersigned act of land as for Easting: Northing: ccess: farm name: the name, additator's authoriz Department of isiting www.de	well operator has an intent to enter upon ollows: 549741.2 4333955.3 SR 19 Nutter ress, telephone number, and if available, ed representative. Additional information of Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx. Diane White 5260 Dupont Road
Notice is here Pursuant to We the surface own State: County: District: Quadrangle: Watershed: This Notice Pursuant to We facsimile num related to hore located at 601 Notice is here Well Operator Address:	reby given: //est Virginia Code § 22-6A-16(b) vner's land for the purpose of drill West Virginia Harrison Grant West Milford WV 7.5' Middle West Fork Creek Shall Include: West Virginia Code § 22-6A-16(nber and electronic mail address izontal drilling may be obtained: 57th Street, SE, Charleston, WV reby given by: F: HG Energy II Appalachia, LLC 5260 Dupont Road Parkersburg, WV 26101	(b), this notice of the operato from the Secret	UTM NAD 83 Public Road Ad Generally used shall include to and the operatory, at the WV 6-0450) or by v	ne undersigned act of land as for Easting: Northing: ccess: farm name: the name, additator's authoriz Department of isiting www.de	well operator has an intent to enter upon ollows: 549741.2 4333955.3 SR 19 Nutter ress, telephone number, and if available, ed representative. Additional information of Environmental Protection headquarters, ep.wv.gov/oil-and-gas/pages/default.aspx. Diane White 5260 Dupont Road Parkersburg, WV 26101

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.

Operator Well No. NO5/190/2019

WW-6A5 (1/12)

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS NOTICE OF PLANNED OPERATION

Delivery met	ee: 02/13/2019 Date Permit	no later than the filing da Application Filed: 02/21/1		application.	RECEIVED Office of Oil and Gas
	hod pursuant to West Virginia Code	§ 22-6A-16(c)			FEB 2 2 2019
■ CERTI	FIED MAIL	HAND			
	RN RECEIPT REQUESTED	DELIVERY			WV Department of Environmental Protection
return receipt the planned of required to be drilling of a l damages to th (d) The notice of notice.	V. Va. Code § 22-6A-16(c), no later the requested or hand delivery, give the surperation. The notice required by this exprovided by subsection (b), section tenderizontal well; and (3) A proposed sure surface affected by oil and gas operatives required by this section shall be given by provided to the SURFACE OWN	rface owner whose land we subsection shall include of this article to a surface rface use and compensations to the extent the damento the surface owner at	will be used for : (1) A copy e owner whose ion agreement ages are com	or the drilling of a horize of this code section; (2 se land will be used in cost at containing an offer of pensable under article si	ontal well notice of 2) The information onjunction with the f compensation for ix-b of this chapter.
(at the addres	s listed in the records of the sheriff at th	e time of notice):			
	A. Nutter	Name:	William W. & Lind	a Broadwater	-
Address: 382 h	Lew, WV 26378	Address:	132 Praise Lane Jane Lew, WV 26	378	_
Pursuant to W	est Virginia Code § 22-6A-16(c), notic	e is hereby given that the	undersigned	well operator has develo	pped a planned
operation on State: County: District:	Vest Virginia Code § 22-6A-16(c), notice the surface owner's land for the purpose West Virginia Harrison Grant West Milford WV 7.5' Middle West Fork Creek		well on the tra Easting: Northing: ccess:		pped a planned
operation on State: County: District: Quadrangle: Watershed: This Notice S Pursuant to W to be provide horizontal we surface affect information r	West Virginia Harrison Grant West Milford WV 7.5' Middle West Fork Creek Shall Include: /est Virginia Code § 22-6A-16(c), this read by W. Va. Code § 22-6A-10(b) to a delt; and (3) A proposed surface use and ded by oil and gas operations to the extellated to horizontal drilling may be oblocated at 601 57th Street, SE, Cha	UTM NAD 83 Public Road Ac Generally used notice shall include: (1)A a surface owner whose I compensation agreement ent the damages are com stained from the Secretar	well on the tra Easting: Northing: ccess: farm name: copy of this and will be a containing an appensable und y, at the WV	ct of land as follows: 549741.2 4333955.3 SR 19 Nutter code section; (2) The in ised in conjunction with offer of compensation er article six-b of this compensation of Environer Section 19 (2) The individual of the section of	formation required the the drilling of a for damages to the chapter. Additional nmental Protection
operation on State: County: District: Quadrangle: Watershed: This Notice S Pursuant to W to be provide horizontal we surface affect information r headquarters, gas/pages/def	West Virginia Harrison Grant West Milford WV 7.5' Middle West Fork Creek Shall Include: Vest Virginia Code § 22-6A-16(c), this red by W. Va. Code § 22-6A-10(b) to a dl; and (3) A proposed surface use and red by oil and gas operations to the extellated to horizontal drilling may be oblocated at 601 57th Street, SE, Charault.aspx.	UTM NAD 83 Public Road Ac Generally used notice shall include: (1)A a surface owner whose I compensation agreement ent the damages are com stained from the Secretar arleston, WV 25304 (3)	well on the tra Easting: Northing: ccess: farm name: copy of this and will be a containing an appensable und y, at the WV	ct of land as follows: 549741.2 4333955.3 SR 19 Nutter code section; (2) The in ised in conjunction with offer of compensation er article six-b of this compensation of Environer Section 19 (2) The individual of the section of	formation required the the drilling of a for damages to the chapter. Additional nmental Protection
operation on State: County: District: Quadrangle: Watershed: This Notice S Pursuant to W to be provide horizontal we surface affect information r headquarters,	West Virginia Harrison Grant West Milford WV 7.5' Middle West Fork Creek Shall Include: Vest Virginia Code § 22-6A-16(c), this red by W. Va. Code § 22-6A-10(b) to a dl; and (3) A proposed surface use and red by oil and gas operations to the extellated to horizontal drilling may be oblocated at 601 57th Street, SE, Charault.aspx.	UTM NAD 83 Public Road Ac Generally used notice shall include: (1)A a surface owner whose I compensation agreement ent the damages are con stained from the Secretar arleston, WV 25304 (3) Address: 5	well on the tra Easting: Northing: ccess: farm name: copy of this and will be a containing an appensable und y, at the WV 04-926-0450)	ct of land as follows: 549741.2 433955.3 SR 19 Nutter code section; (2) The in its offer of compensation er article six-b of this of Department of Enviro or by visiting www.d	formation required the the drilling of a for damages to the chapter. Additional nmental Protection
operation on State: County: District: Quadrangle: Watershed: This Notice S Pursuant to W	the surface owner's land for the purpose West Virginia Harrison Grant West Milford WV 7.5' Middle West Fork Creek Shall Include: /est Virginia Code § 22-6A-16(c), this is	UTM NAD 83 Public Road Ac Generally used	well on the tra Easting: Northing: ccess: farm name:	ct of land as follows: 549741.2 4333955.3 SR 19 Nutter code section; (2) The in	formation require
peration on tate: county: coun	the surface owner's land for the purpose West Virginia Harrison Grant West Milford WV 7.5' Middle West Fork Creek Shall Include: /est Virginia Code § 22-6A-16(c), this red by W. Va. Code § 22-6A-10(b) to a cell; and (3) A proposed surface use and red by oil and gas operations to the extended to horizontal drilling may be oblocated at 601 57th Street, SE, Charault.aspx. T: HG Energy II Appalachia, LLC	UTM NAD 83 Public Road Ac Generally used notice shall include: (1)A a surface owner whose I compensation agreement ent the damages are con stained from the Secretar arleston, WV 25304 (3) Address: 5	well on the tra Easting: Northing: Northing: cess: farm name: copy of this and will be a containing an appensable und y, at the WV 04-926-0450)	ct of land as follows: 549741.2 433955.3 SR 19 Nutter code section; (2) The in its offer of compensation er article six-b of this of Department of Enviro or by visiting www.d	formation required the the drilling of a for damages to the chapter. Additional nmental Protection

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110 Charleston, West Virginia 25305-0430 • (304) 558-3505

February 13, 2019

Thomas J. Smith, P. E. Secretary of Transportation/ Commissioner of Highways

Jill M. Newman Deputy Commissioner

James A. Martin, Chief Office of Oil and Gas Department of Environmental Protection 601 57th Street, SE Charleston, WV 25304

Subject: DOH Permit for the Nutter 1208 Well Pad, Harrison County N-3H Well Site

Dear Mr. Martin,

This well site will be accessed from Permit #04-2018-1374 issued to HG Energy II Appalachia for access to the State Road for a well site located off of Harrison County 19/20 SLS.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018. 82.

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer

Central Office O&G Coordinator

RECEIVED
Office of Oil and Gas

FEB 2 2 2019

WV Department of Environmental Protection

Cc:

Diane C. White HG Energy II, LLC CH, OM, D-4 File

List of Frac Additives by Chemical Name and CAS

Nutter 1208 Well Pad (N-1H to N-5H, S-6H to S-10H)

Chemical Name	CAS#	Multiple CAS #'s
Pro Shale Slik 405	Mixture	68551-12-2
		7647-14-5
		12125-02-9
		64742-47-8
Pro Hib II	Mixture	68412-54-4
		68607-28-3
		107-21-1
		111-76-2
		67-56-1
		107-19-7
Silica Sand and Ground Sand	Mixture	14808-60-7
		1344-28-1
		1309-37-1
		13463-67-7
Hydrochloric Acid 22 DEG BE	7647-01-0	
PROGEL - 4.5	64742-96-7	
BIO CLEAR 2000	Mixture	25322-68-3
DIO CELATI 2000	IVIIXture	10222-01-2
SCALE CLEAR SI 112	107-21-1	
PROBREAK 4	Mixture	57-50-1
		107-21-1
Sulfamic Acid	5329-14-6	
PRO - Flow - 102-N	Mixture	67-63-0
		68439-45-2
		2687-96-9
PROGEL - 4	9000-30-0	

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Office of Oil and Gas

FEB 2 2 2019

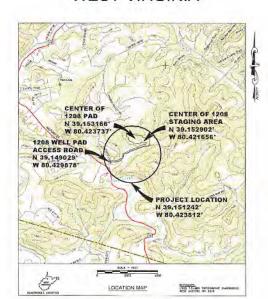
WV Department of Environmental Protection



GRANT DISTRICT HARRISON COUNTY WEST VIRGINIA

CONSTRUCTION SEQUENCE

- Prior to commencement of any earth disturbance activity including clearing and grubbing, the registrant shall call West Virginia 811 by dialing 811 or 1-800-245-4848 to identify all utility lines. The registrant also must clearly delimeate sensitive areas, laperain forest buffer boundaries, the limits of clearing, and trees that are to be conserved within the project site, and shall install appropriate barriers where equipment may not be parked, staged, operated or located for any purpose.
- Site access This is the first land-disturbance activity to take place at the site and should provide BMPs to minimize accelerated crossion and sedimentation from the following areas: entrance to the site, construction routes, and areas designated for equipment or other use at the site including parking, stockpies.
- Sediment Barriers Install perimeter BMPs after the construction site is accessed, keeping associated clearing and grubbing limited to only that amount required for installing perimeter BMPs.
- Land Clearing and Grading Implement clearing and grading only after all downslope E&S BMPs have been constructed and stabilized.
- Surface Stabilization Apply temporary or permanent stabilization measures immediately to any disturbed areas where work has reached final grade, has been delayed or otherwise temporarily suspended.
 Construction of Budings, Utilities, and Paving - During
- Construction of Buildings, Utilities, and Paving During construction, install and maintain any additional erosion and sediment control BMPs, and implement any structural post construction stormwater BMPs that may be required.
- Upon completion of pad grading, compact the pad to grade and begin placement of pad soil cement.
- Final Stabilization, Topsoilling, Trees and Shrubs After construction is completed, install stabilization BMPs including permanent seeding, mulching and riprap, and complete implementation of stormwater BMPs in this last construction phase. Stabilize all open areas, including borrow and spoil areas, and remove all temporary BMPs and stabilize any disturbances associated with the removal of the BMP.



PREPARED FOR HG ENERGY II APPALACHIA, LLC

5260 DUPONT ROAD PARKERSBURG, WEST VIRGINIA 26101 (304) 420-1100

PREPARED BY

PENN ENVIRONMENTAL & REMEDIATION, INC.

111 RYAN COURT PITTSBURGH, PA 15205 (412) 722-1222

	Cut	FE	Stockpile
1208 Well Pad & Sugnig Area	56.552	65,513	-8.961
Access Road	8,895	5.064	2.931
Tone	(25,149)	70,767	-6,000
Soll Acquisiment for A	gyregere import:		
Prict			8,665
Total Site Delence:			2,635 Cu
Strpped Topsol Ibm	vi of Disturbance	1	18.085
Let. Swell Factor	13	80%G)	3,637
	Volume il eggs		21 702

1. Material trained for init, gloss network quarries only.
2. Topical ed., where traveline it inches recognitions.
3. Material trained and aggregate quarties based on initirates and may not be representative of actual quarties.
4. Eximates do not reflect compactor by youthness.

Enrinteed Gravel Countities				
	Tac Park	TOO Daying	Band.	TOTAL
87 Soil Corrent (Placed 5Y)	20,111	14,147	9.877	54,195
3º Depm of 3:4º Crusher Run (Tons)	3,262	1,533	-	4,795
Top Cred Chip & Self (Record St)	-	**	9,677	9,077
				12"
Estimated Total Compast Filter Societa	leigh (i F	Ð		6.760
Fall maked Andrew Heart Filter Stock Lie	egts u.Fr			2,534
Est maked Well that and Staging Area	Fam Suc	Flanship)	3,926
Estimated Total Limit of Disturbanc	e (Apres)			22,420
Essimated Access Road Limit of Di-	sturbano	e (Acres)		7,021
Estimates Well Pau and Stagma Arc	atms of	Distriction of	(40,000)	15,300

Well Pivd and Staging Area Peak Pre-Construction Elevation (Fig. 1162.0)

SHT. NO.	SHEET TITLE	
1	WILE SHEET	
2A-2D	SITE DEVELOPMENT PLANS	
3A-3B	PAD & STOCKPILE SECTIONS	
4A 4C	ACCESS ROAD SECTIONS	
5A-5F	CONSTRUCTION NOTES & DETAILS	
6A-60	RESTORATION PLAN	
7	PROPERTY MAP	

WELL #	LAT.	LONG.
N-TH	N 29.153300	W 80.424351
N-2H	N 39.153340	W 80.424337
N-3H	N 39.153379	W 80.424324
N-5H	N 39.153419	W 80.424310
N-4H	N 39.153459	W 80.424296
S-7H	N 39.153074	W 60.423284
S-6H	N 39.153114	W 80.423270
S-BH	N 39.153154	W BO.423256
S-9H	N 39.153193	W 80.423242
9-10H	N 39.153233	W 80.423228

						LATITUDE	LONGITUDE
1208	WELL	PAD	ACCESS	ROAD	ENTRANCE	N 39.149029	W 80,429878

RECORD ÓWNER	RECORD.	RECORD- AREA OF LOT	AREA WITHIN LOD
NUTTER LISE U	17-12-0445-0009-0000	105.50 AC	2.164 AC.
FELDY CARCL (LE) NUTTER LICA &	17-12-0445-2001-0000	87.78 AC.	4.136 AC.
KUTTER USA U	17-12-0445-0010-0000	68.87 AC.	4.187 AC.
DESCRIPTION WILLIAM WHE ALLINDA L	17-12-0445-0031-0000	247.84 AC	11,933 AC.
TOTAL LIMIT OF DISTURBANCE			22,420 AC

20468



HG 1208 WELL PAD GRANT DISTRICT HARRISON COUNTY, WEST VIRGINIA

HG ENERGY II APPALACHIA, LLC PARKERSBURG, WEST VIRGINIA

POVED MEP 11/06/2018
ICKLD VEP 10/79/2018
ICKLD VEP 10/79/2018
MAY DAY 10/79/2018
DEET No. 4000-04007778
OPWAND BURGER
PA007778-001
SHEET 1



WEST VIRGINIA

YOU DIG!

 SERVICE UTU, ITV LINES ARE NOT SHOWN ON THE HUARS. THE CONTRACTOR DRIVE BE REJECTIONS OF THE CONTRACT WHIT LINES, AND REPLACED AS RECESSIVET DISCUSSIVE CONTRACT, DESIGN.

