



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, January 29, 2019
WELL WORK PERMIT
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD
PARKERSBURG, WV 26101

Re: Permit approval for NAYS 1209 N-6H
47-033-05939-00-00

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: NAYS 1209 N-6H
Farm Name: HG ENERGY II APPALACHIA
U.S. WELL NUMBER: 47-033-05939-00-00
Horizontal 6A New Drill
Date Issued: 1/29/2019

Promoting a healthy environment.

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: _____

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- _____ - _____
OPERATOR WELL NO. Nays 1209 N-6H
Well Pad Name: Nays 1209

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

1) Well Operator: HG Energy II Appalachia, L.P. 494519932 Harrison Union West Milford 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Nays 1209 N-6H Well Pad Name: Nays 1209

3) Farm Name/Surface Owner: Nays / HG Energy II Appalachia Public Road Access: Kincheloe Run Rd/SLS 35

4) Elevation, current ground: 1002' Elevation, proposed post-construction: 1007'

5) Well Type (a) Gas Oil _____ Underground Storage _____

Other _____

(b) If Gas Shallow Deep _____

Horizontal _____

*SDW
10/22/2018*

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 6863'/6914' and 51' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6900'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 23,028'

11) Proposed Horizontal Leg Length: 14757'

12) Approximate Fresh Water Strata Depths: 135', 500'

13) Method to Determine Fresh Water Depths: Nearest offset well data

14) Approximate Saltwater Depths: None noted in offsets

15) Approximate Coal Seam Depths: 660' to 665'

16) Approximate Depth to Possible Void (coal mine, karst, other): None

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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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	100'	100'	Drilled In
Fresh Water	20"	NEW	J-55	94	600'	600'	40% excess yield = 1.20, CTS
Coal	13 3/8"	NEW	J-55	54.5	1635'	1635'	40% excess yield = 1.20, CTS
Intermediate	9 5/8"	NEW	J-55	40	2500'	2500'	40% excess yield Lead/ 0% Excess T CTS
Production	5 1/2"	NEW	P-110	23	23028'	23028'	20% excess yield = 1.19, tail yield = 1.04 CTS
Tubing							
Liners							

SDW
10/22/2018

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	30"	.500				CTS
Fresh Water	20"	24"	.438	2110	1200	Type 1, Class A	30% excess yield = 1.20, CTS
Coal	13 3/8"	17 1/2"	.380	2730		Type 1/Class A	40% excess yield = 1.20, CTS
Intermediate	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	40% excess yield = 0% Excess Lead CTS
Production	5 1/2"	8 1/2"	.415	14520	12500	Type 1/Class A	20% excess yield = 1.19, tail yield = 1.04 CTS
Tubing							
Liners							

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PACKERS

Kind:					WV Department of Environmental Protection
Sizes:					
Depths Set:					

WW-6B
(10/14)

API NO. 47- _____ - _____
OPERATOR WELL NO. Nays 1209 N-6H
Well Pad Name: Nays 1209

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6900 feet. Drill horizontal leg to estimated 14757 TMD, 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.

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): 16.148 acres

22) Area to be disturbed for well pad only, less access road (acres): 10.834 acres

23) Describe centralizer placement for each casing string:

No centralizers will be used with conductor casing.
Freshwater - centralized every 3 joints to surface.
Coal - Bow Spring on every joint
Intermediate - Bow Spring on first 2 joints then every third joint to 100' from surface.
Production - Run 1 spiral centralizer every 5 joints from the top of the curve to surface. Run 1 spiral centralizer every 3 joints from the 1st 5.5' long joint to the top of the curve.

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

Conductor - N/A, Casing to be drilled in w/ Dual Rotary Rig.
Fresh Water - 15.8 ppg PNE-1 + 3% bwoc CaCl₂, 40% Excess Yield = 1.20, CTS
Coal - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl₂, 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl₂ zero% Excess. CTS
Intermediate - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl₂, 40% Excess, Tail: 15.5 ppg PNE-1 + 2.5% bwoc CaCl₂, zero% Excess. CTS
Production - Lead: 14.5 ppg POZ-PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170, Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA17020% Excess/Lead Yield=1.19/Tail Yield=1.94, CTS

25) Proposed borehole conditioning procedures:

Conductor - Ensure the hole is clean at TD.
Fresh Water - Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.
Coal - Once casing is at setting depth, circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.
Intermediate - Once casing is at setting depth, circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement.
Production - Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.

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*Note: Attach additional sheets as needed.

Nays 1209 Well Pad (N-1H to N-6H, S-7H to S-12H)

Cement Additives

Material Name	Material Type	Material Description	CAS #																		
Premium NE-1	Portland Cement	Premium NE-1 is a portland cement with early compressive strength properties.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Portland cement</td> <td>90 - 100</td> <td>85997-15-1</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> <tr> <td>Magnesium oxide</td> <td>1 - 5</td> <td>1309-48-4</td> </tr> <tr> <td>Crystalline silica: Quartz (SiO₂)</td> <td>0.1 - 1</td> <td>14808-60-7</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Portland cement	90 - 100	85997-15-1	Calcium oxide	1 - 5	1305-78-8	Magnesium oxide	1 - 5	1309-48-4	Crystalline silica: Quartz (SiO ₂)	0.1 - 1	14808-60-7			
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Bentonite	Extender	Commonly called gel, it is a clay material used as a cement extender and to control excessive free water.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>bentonite</td> <td>90 - 100</td> <td>1302-78-9</td> </tr> <tr> <td>Crystalline silica: Quartz (SiO₂)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	bentonite	90 - 100	1302-78-9	Crystalline silica: Quartz (SiO ₂)	5 - 10	14808-60-7									
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Calcium Chloride	Accelerator	A powdered, flaked or pelletized material used to decrease thickening time and increase the rate of strength development	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Calcium chloride</td> <td>90 - 100</td> <td>10043-52-4</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Calcium chloride	90 - 100	10043-52-4												
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Cello Flake	Lost Circulation	Graded (3/8 to 3/4 inch) cellophane flakes used as a lost circulation material.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table>	Ingredient name	%	CAS number	No hazardous ingredient														
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FP-13L	Foam Preventer	FP-13L is a clear liquid organic phosphate antifoaming agent used in cementing operations. It is very effective minimizing air entrapment and preventing foaming tendencies of latex systems.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Tributyl phosphate</td> <td>90 - 100</td> <td>126-73-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Tributyl phosphate	90 - 100	126-73-8												
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Granulated Sugar	Retarder	Used to retard cement returns at surface. A proprietary product that provides expansive properties and improves bonding at low to moderate temperatures.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Sucrose</td> <td>90 - 100</td> <td>57-50-1</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Sucrose	90 - 100	57-50-1												
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EC-1	Gas Migration	Multi-purpose polymer additive used to control free fluid, fluid loss, rheology, and gas migration.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table>	Ingredient name	%	CAS number	No hazardous ingredient														
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Poz (Fly Ash)	Base	A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Crystalline silica: Quartz (SiO₂)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Crystalline silica: Quartz (SiO ₂)	5 - 10	14808-60-7	Calcium oxide	1 - 5	1305-78-8									
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R-3	Retarder	A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Organic acid salt</td> <td>40 - 50</td> <td>Trade secret.</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Organic acid salt	40 - 50	Trade secret.												
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S-5	Surfactant	Used to water wet casing and formation to facilitate cement bonding.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>2-Butoxyethanol</td> <td>20 - 30</td> <td>111-76-2</td> </tr> <tr> <td>Proprietary surfactant</td> <td>10 - 20</td> <td>Trade secret.</td> </tr> <tr> <td>D-Glucopyranose, oligomeric, C10-16-alkyl glycosides</td> <td>5 - 10</td> <td>110615-47-9</td> </tr> <tr> <td>Alkylarylsulfonate amine salt</td> <td>1 - 5</td> <td>Trade secret.</td> </tr> <tr> <td>Polyoxyalkylenes</td> <td>0.1 - 1</td> <td>Trade secret.</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	2-Butoxyethanol	20 - 30	111-76-2	Proprietary surfactant	10 - 20	Trade secret.	D-Glucopyranose, oligomeric, C10-16-alkyl glycosides	5 - 10	110615-47-9	Alkylarylsulfonate amine salt	1 - 5	Trade secret.	Polyoxyalkylenes	0.1 - 1	Trade secret.
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1209 N-6H
Marcellus Shale Horizontal
Harrison County, WV

				1209 N-6H SHL				237394.8N 1732372.24E			
Ground Elevation		1007'		1209 N-6H LP				238712.06N 1734876.74E			
Azm		340.737°		1209 N-6H BHL				252642.42N 1730008.6E			

WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS	
	30"	30" 157.5# LS	Conductor	0	100	AIR	N/A, Casing to be drilled in w/ Dual Rotary Rig	N/A	Ensure the hole is clean at TD.	Conductor casing = 0.5" wall thickness	
	24"	20" 94# J-55	Fresh Water	0	135, 500	AIR	15.6 ppg PNE-1 + 3% bwoc CaCl 40% Excess Yield=1.20 / CTS	Centralized every 3 joints to surface	Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.	Surface casing = 0.438" wall thickness Burst=2110 psi	
			Fresh Water	0	600						
	17.5"	13-3/8" 68# J-55 BTC	Kittanning Coal	660	665	AIR / KCL Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on every joint	Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.480" wall thickness Burst=3450 psi	
			Little/Big Lime	1126 / 1167	1151 / 1243						
			Injun / Gantz (Storage)	1243 / 1535	1349 / 1585						
			Intermediate 1 (Shoe 50' below storage)	0	1635						
	12.25"	9-5/8" 40# J-55 BTC	Fifty / Thirty Foot	1650 / 1730	1697 / 1742	AIR / KCL Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on first 2 joints then every third joint to 100' form surface	Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.395" wall thickness Burst=3950 psi	
			Gordon Stray / Gordon	1785 / 1850	1850 / 1940						
			5th Sand	2035	2070						
			Bayard Sand	2125	2160						
			Intermediate 2	0	2500						
	8.5" Vertical	5-1/2" 23# P-110 HC CDC HTQ	Speechley	2745	2763	9.0ppg SOBM	Lead: 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170 Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess Lead Yield=1.19 Tail Yield=1.94 CTS	Run 1 spiral centralizer every 5 joints from the top of the curve to surface.	Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.415" wall thickness Burst=14520 psi Note:Actual centralizer schedules may be changed due to hole conditions	
			Balltown	2965	3005						
			Benson	4050	4083						
West Falls			4620	5865							
8.5" Curve			5-1/2" 23# P-110 HC CDC HTQ	Rhinestreet	5865	6140		11.5ppg-12.5ppg SOBM			Run 1 spiral centralizer every 3 joints from the 1st 5.5" long joint to the top of the curve.
				Cashaqua	6140	6341					
				Middlesex	6341	6421					
				West River	6421	6514					
				Burkett	6514	6540					
				Tully Limestone	6540	6644					
8.5" Lateral	5-1/2" 23# P-110 HC CDC HTQ	Hamilton	6644	6863	11.5ppg-12.5ppg SOBM	Run 1 spiral centralizer every 3 joints from the 1st 5.5" long joint to the top of the curve.					
		Marcellus	6863	6914							
		TMD / TVD (Production)	23028	6900							
			Onondaga	6914							

LP @ 6900' TVD / 8271' MD

8.5" Hole - Cemented Long String
5-1/2" 23# P-110 HC CDC HTQ

+/-14757' ft Lateral

TD @ +/-6900' TVD
+/-23028' MD

X=centralizers

List of Frac Additives by Chemical Name and CAS #

Nays 1209 Well Pad (N-1H to N-6H, S-7H to S-12H)

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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 Environmental Protection

WW-9
(4/16)

API Number 47 - _____ - _____
Operator's Well No. Nays 1209 N-6H

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

Watershed (HUC 10) West Fork Quadrangle West Milford 7.5'

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes 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 so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number TBD - At next anticipated well)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

*SOW
10/22/2018*

Will closed loop system be used? If so, describe: Yes, cuttings and fluids will be collected in a closed loop drilling system, re-used or hauled to an approved disposal site or landfill.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air, Freshwater and SOB.M.

-If oil based, what type? Synthetic, petroleum, etc. Synthetic

Additives to be used in drilling medium? Water, Soap, KCl, Barite, Base Oil, Wetting Agents

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Approved Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) NA

-Landfill or offsite name/permit number? See Attached List

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature Diane White

Company Official (Typed Name) Diane White

Company Official Title Agent

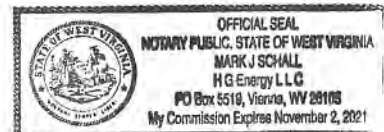
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Subscribed and sworn before me this 19th day of October, 20 18

[Signature]

Notary Public

My commission expires 11/2/2021



WV Department of Environmental Protection

HG Energy II Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 16.148 Prevegetation pH _____

Lime _____ 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount _____ 500 lbs/acre

Mulch Hay _____ 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5

Maintain E&S controls through the drilling and completion process

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, include dimensions (L x W x D) of the pit, and dimensions (L x W), and area in acreage, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: S. D. Wanstall

Comments: Pre-seed/mulch as soon as reasonably possible per regulation.

Upgrade E&S if needed per WV DEP E&S manual.

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Title: Oil & Gas Inspector

Date: 10/19/2018

Field Reviewed? Yes No

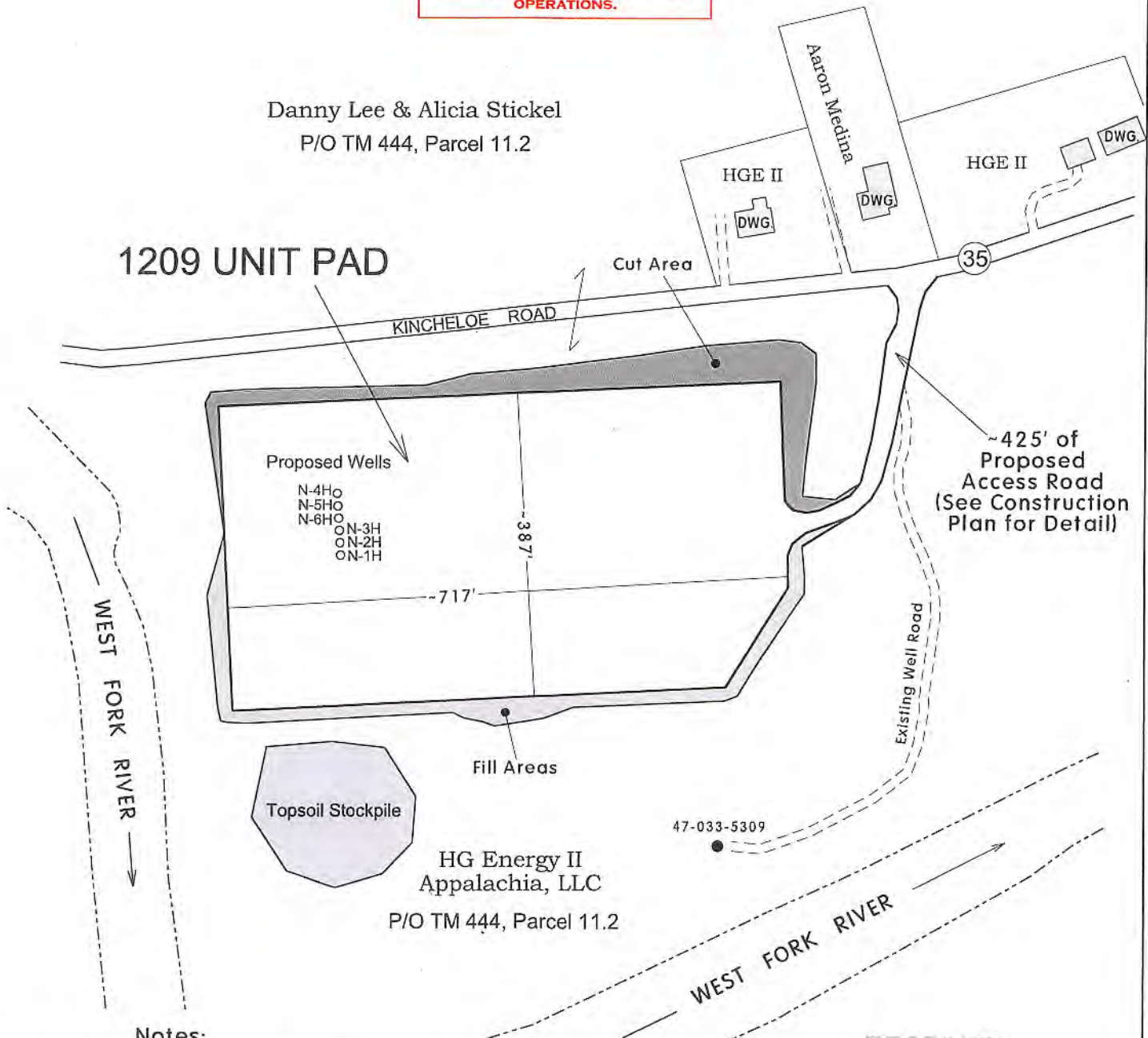
Reclamation Plan For: 1209 UNIT PAD

NOTE
REFER TO THE WVDEP
EROSION AND SEDIMENT CONTROL
FIELD MANUAL VER. MAY 2012 FOR
BMPs CONTROLLING EROSION AND
SEDIMENT FROM SOIL-DISTURBING
OPERATIONS.



Danny Lee & Alicia Stickel
P/O TM 444, Parcel 11.2

1209 UNIT PAD



Notes:

- REQUESTED PERMIT IS FOR DRILLING NEW HORIZONTAL WELL.
- LOCATION AND ACCESS ROADS WILL BE CONSTRUCTED AS SHOWN ON THE ENGINEERED DRAWINGS WHICH ACCOMPANY THIS PERMIT APPLICATION. REFERENCE IS HEREBY MADE TO THOSE PLANS FOR MORE DETAIL ON E&S MEASURES TO BE TAKEN TO ENSURE COMPLIANCE WITH WVDEP RECLAMATION STANDARDS.
- ALL DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
- MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
- NO DRILL PIT WILL BE CONSTRUCTED AND A CLOSED LOOP SYSTEM WILL BE UTILIZED TO HANDLE DRILL CUTTINGS.
- DRAWING NOT TO SCALE.

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Cuttings Disposal/Site Water

Cuttings -Haul off Company:

Eap Industries, Inc. DOT # 0876278
1575 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 18
Cochran, PA 16314
814-425-7773

Disposal Locations:

Apex Environmental, LLC Permit # 06-08488
11 County Road 78
Amsterdam, OH 43903
740-543-4889

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

Sycamore Landfill Inc, Permit #R30-079001 05-2010
4301 Sycamore Ridge Road
Hurricane, WV 25526
304-562-2611

Max Environmental Technologies, Inc. Facility Permit # PAD004835146 / 301071
233 Max Lane
Yukon, PA 25968
724-722-3500

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

Waste Management Kelly Run Permit # 100663
1901 Park Side Drive
Elizabeth, PA 15037
412-384-7569

Waste Management South Hills (Arnoni) Permit # 100592
3100 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 Meadowfill Permit # 1032
1488 Dawson Drive
Bridgeport, WV 26330

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

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Wetzel County Landfill Permit # SWF-1021-97 / WV 0109185
Rt 1 Box 156A
New Martinsville, WV 26035
804-455-3800

Energy Solutions, LLC Permit # UT 2300249
428 West 300 South
Suite 200
Salt Lake City, UT 84101

Energy Solutions Services, Inc. Permit # R-73006-L24
1560 Bear Creek Road
Oak Ridge, TN 37830

Northern A-1 Environmental Services Permit ID MID020906814
3947 US 131 North, PO Box 1030
Kalkaska, MI 49646
231-258-9961

Water Haul off Companies:

Dynamic Structures, Clear Creek DOT # 720485
3790 State Route 7
New Waterford, OH 44445
330-892-0164

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

Select Energy Services, LLC
PO Box 203997
Dallas, TX 75320-3997

Nuverra Environmental Solutions
11942 Veterans Memorial Highway
Masontown, WV 26542

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

Wilson's Outdoor Services, LLC
456 Cracraft Road
Washington, PA 15301

Disposal Locations:

Solidification
Waste Management, Arden Landfill Permit # 100172
200 Rangos Lane
Washington, PA 15301
724-225-1589

Solidification/Incineration
Soil Remediation, Inc. Permit # 02-20753
6065 Arrel-Smith Road
Lowelville, OH 44435
330-536-6825

Adams #1 (Buckeye Brine, LLC)
Permit # 34-031-2-7177
23986 Airport Road
Coshocton, OH 43812
740-575-4484
512-478-6545

CMS of Delaware Inc. DBA CMS Oilfield Serv
301 Commerce Drive
Moorestown, NJ 08057

Force, Inc.
1380 Rts. 286 Hwy. E, Suite 303
Indiana, PA 15701

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

Equipment Transport
1 Tyler Court
Carlisle, PA 17015

Myers Well Service, _____
2001 Ballpark Court
Export, PA 15682

Burns Drilling & Excavating
618 Crabapple Road P.O. Box
Wind Ridge, PA 15380

Nichols 1-A (SWIW #13)
Permit # 3862
300 Cherrington Pkwy, Suite 200
Coraopolis, PA 15108
412-829-7275

Groselle (SWIW #34)
Permit # 4096
Rt. 88
Garrettsville, OH
719-275-4816

Kemble 1-D Well
Permit # 8780
7675 East Pike
Norwich, Oh 43767
614-648-8898
740-786-6495

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Adams #2 (Buckeye Brine, LLC)
2205 Westover Road
Austin Tx 78703
Permit # 34-031-2-7178
740-575-4484
512-478-6545

Adams #3 (Buckeye Brine, LLC)
Permit #34-031-2-7241-00-00
2630 Exposition, Suite 117
Austin, TX 78703
512-478-6545

Mozena #1 Well (SWIW # 13)
Permit # 34-157-2-5511-00-00
5367 E. State Street
Newcomerstown, OH 43882
740-763-3966

Goff SWD #1 (SWIW # 27)
Permit # 34-119-2-8776-000
300 Cherrington Pkwy, Suite 200
Coraopolis, PA 15108
412-329-7276

SOS D#1 (SWIW #12)
Permit # 34-059-2-4202-00-00
Silcor Oilfield Services, Inc.
2999 Hubbard Road
Youngstown, OH 44505

Dudley #1 UIC (SWIW #1)
Permit # 34-121-2-2459-00-00
Select Energy Services, LLC
7994 S. Pleasants Hwy
St. Marys, WV 26170
304-665-2652

OH UIC #1 Buckeye UIC Barnesville 1 & 2
CNX Gas Company, LLC
1000 Consol Energy Drive
Permit # 34-013-2-0609-00-00
Permit # 34-013-2-0614-00-00
304-323-6568

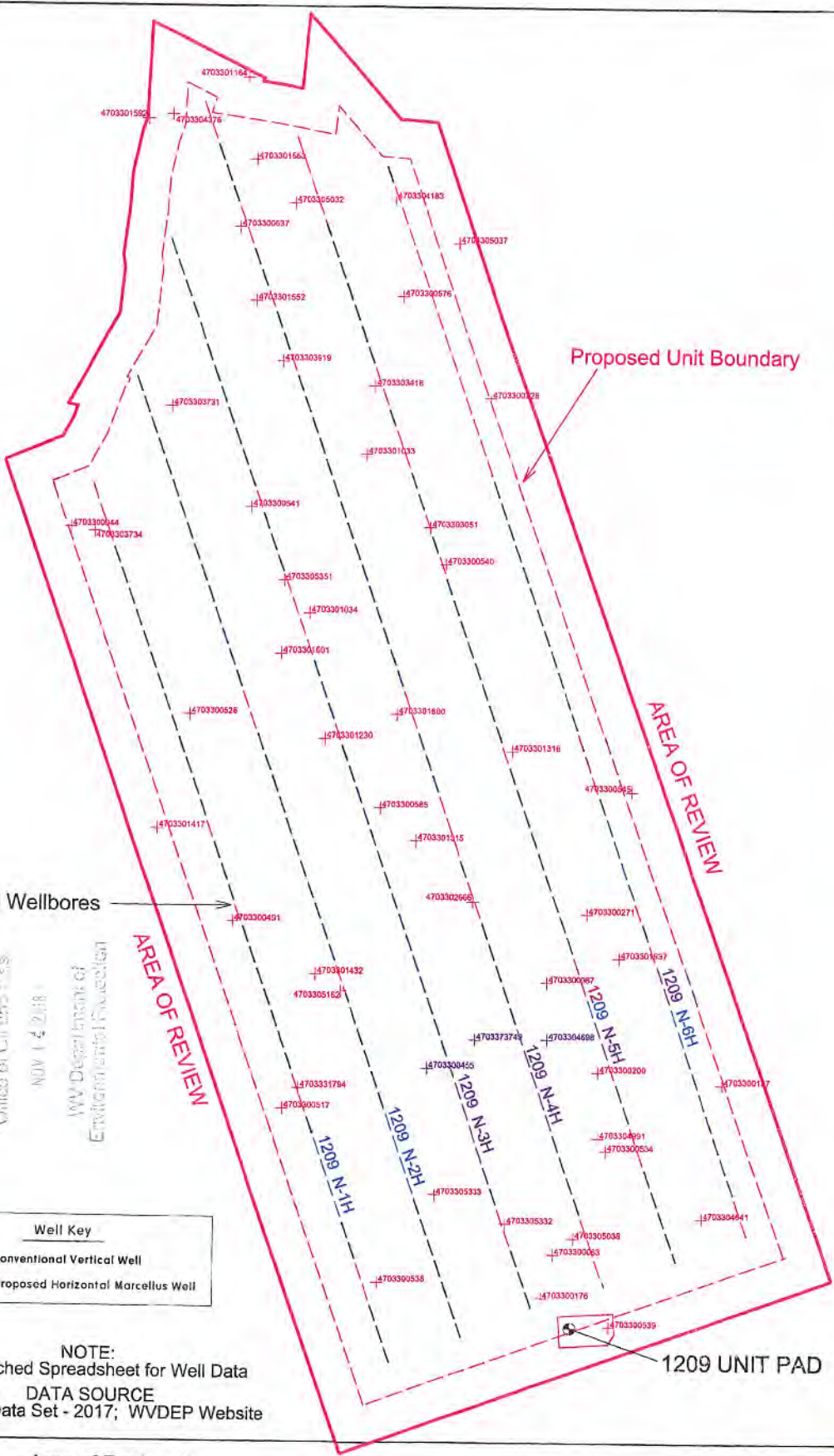
US Steele 11385
Permit # 47-001-00561
200 Evergreen Drive
Waynesburg, PA 15730
304-323-6568

Chapin #7 UIC (SWIW #7)
Permit # 34-083-2-4137-00-00
Elkhead Gas & Oil Company
12163 Marne Rd. NE
Newark, OH 43055
740-763-3966

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Proposed Wellbores

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Well Key	
	Conventional Vertical Well
	Proposed Horizontal Marcellus Well

NOTE:
See Attached Spreadsheet for Well Data
DATA SOURCE
WVGES Data Set - 2017; WVDEP Website

Area of Review for:

1209 UNIT PAD

- Proposed 1209 N-1H
- Proposed 1209 N-2H
- Proposed 1209 N-3H
- Proposed 1209 N-4H
- Proposed 1209 N-5H
- Proposed 1209 N-6H

Union District, Harrison County, W.Va.

HG ENERGY, II APPALACHIA, LLC
5260 DuPont Road, Parkersburg, WV 26101



**EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:
1209 UNIT PAD AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H, N-5H & N-6H**

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4703300063	HARRISON	J A Hardway	Dominion Energy Transmission Inc.	Gantz	Storage	1,636	ACTIVE	39.150649	-80.444245
2	4703300087	HARRISON	V B Washburn	Dominion Energy Transmission Inc.	Gordon Stray	Observation	1,850	ACTIVE	39.160372	-80.444617
3	4703300176	HARRISON	Jerome B Gusman	Dominion Energy Transmission Inc.	Gantz	Storage	1,542	ACTIVE	39.149066	-80.444789
4	4703300197	HARRISON	Leeman Maxwell	Dominion Energy Transmission Inc.	Fifty-foot	Storage	2,102	ACTIVE	39.156758	-80.436440
5	4703300200	HARRISON	E Southern 2	Dominion Energy Transmission Inc.	Fifty-foot	Storage	1,926	ACTIVE	39.157179	-80.442196
6	4703300271	HARRISON	Mary Burnside	Hope Natural Gas Company	Greenland Gap Fm	Gas	2,765	PLUGGED	39.162840	-80.442754
7	4703300455	HARRISON	Mary S Deison	Dominion Energy Transmission Inc.	Fifty-foot	Storage	1,720	ACTIVE	39.157324	-80.450208
8	4703300491	HARRISON	M G Law	Dominion Energy Transmission Inc.	Benson	Gas	4,261	ACTIVE	39.162549	-80.459266
9	4703300517	HARRISON	J S Law	Dominion Energy Transmission Inc.	Benson	Gas	4,400	ACTIVE	39.155873	-80.456916
10	4703300526	HARRISON	W T Law	Dominion Energy Transmission Inc.	Greenland Gap Fm	Storage	4,491	ACTIVE	39.169962	-80.461316
11	4703300534	HARRISON	Mallie Jenkins	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4,140	ACTIVE	39.154422	-80.441823
12	4703300538	HARRISON	Nays Riverbend Farms Inc	Dominion Energy Transmission Inc.	Benson	Gas	4,310	ACTIVE	39.149632	-80.452444
13	4703300539	HARRISON	Nays Riverbend Farm Inc	Dominion Energy Transmission Inc.	Benson	Gas	4,115	ACTIVE	39.148035	-80.441636
14	4703300540	HARRISON	Wm Burnside	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4,775	ACTIVE	39.175333	-80.449463
15	4703300541	HARRISON	Harriet Washburn	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4,561	ACTIVE	39.177365	-80.458520
16	4703300545	HARRISON	Mary Burnside	Dominion Energy Transmission Inc.	Benson	Gas	4,225	ACTIVE	39.167206	-80.440704
17	4703300576	HARRISON	Jacob P Post	Dominion Energy Transmission Inc.	Benson	Gas	4,323	ACTIVE	39.184912	-80.451513
18	4703300585	HARRISON	G W Washburn	Dominion Energy Transmission Inc.	Balltown	Gas	3,228	ACTIVE	39.166613	-80.452444
19	4703300637	HARRISON	Jacob McConkey	Dominion Energy Transmission Inc.	Benson	Gas	4,525	ACTIVE	39.187396	-80.459080
20	4703300728	HARRISON	Jacob P Post	Dominion Energy Transmission Inc.	Balltown	Gas	3,129	ACTIVE	39.181284	-80.447414
21	4703300944	HARRISON	Harriett Washburn 1	Jackson Fuel Corp.	Big Injun (Grnbr)	Dry	2,070	PLUGGED	39.176639	-80.466907
22	4703301033	HARRISON	Jacob P Post	EQT Production Co.	Benson	Gas	4,360	ACTIVE	39.179252	-80.453189
23	4703301034	HARRISON	W M Burnside	EQT Production Co.	Benson	Gas	4,487	ACTIVE	39.173591	-80.455799
24	4703301164	HARRISON	D H Hilkey	Greylock Conventional, LLC	Benson	Gas	4,443	ACTIVE	39.192749	-80.458707
25	4703301230	HARRISON	Brenda Tuckwiller	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4,595	ACTIVE	39.169092	-80.455053
26	4703301315	HARRISON	M Burnside	Dominion Energy Transmission Inc.	Big Lime	Gas	1,213	ACTIVE	39.165452	-80.450767
27	4703301316	HARRISON	M Burnside	Dominion Energy Transmission Inc.	NA	Gas	-	PLUGGED	39.168657	-80.446294
28	4703301417	HARRISON	Paul McDonald	Dominion Energy Transmission Inc.	Alexander	Gas	4,782	ACTIVE	39.165887	-80.462806
29	4703301432	HARRISON	M G Law	Dominion Energy Transmission Inc.	Hampshire Grp	Gas	2,264	NA	39.160667	-80.455411
30	4703301552	HARRISON	J McConkey	Dominion Energy Transmission Inc.	NA	Gas	-	ACTIVE	39.184766	-80.458335
31	4703301553	HARRISON	J McConkey	Dominion Energy Transmission Inc.	NA	NA	-	PLUGGED	39.189847	-80.458334
32	4703301592	HARRISON	G McConkey	Ross & Wharton Gas Co, Inc.	NA	NA	-	ACTIVE	39.191297	-80.463366

33	4703301600	HARRISON	W Burnside	Dominion Energy Transmission Inc.	Hampshire Grp	Gas	2,337	PLUGGED	39.169963	-80.451700
34	4703301601	HARRISON	W Burnside	Dominion Energy Transmission Inc.	Hampshire Grp	Gas	2,243	PLUGGED	39.172140	-80.457103
35	4703301937	HARRISON	Margaret J Bodkin	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4,260	ACTIVE	39.161247	-80.441255
36	4703302666	HARRISON	G W Riffie	Dominion Energy Transmission Inc.	Benson	Gas	4,325	ACTIVE	39.163278	-80.448100
37	4703303051	HARRISON	W M Burnside	Dominion Energy Transmission Inc.	Hampshire Grp	Gas	2,370	PLUGGED	39.176639	-80.450209
38	4703303418	HARRISON	Harry W Post	Dominion Energy Transmission Inc.	Hampshire Grp	Storage	2,028	ACTIVE	39.181719	-80.452817
39	4703303731	HARRISON	Charles Reich	Enervest Operating, LLC	Greenland Gap Fm	Gas	5,004	ACTIVE	39.180993	-80.462247
40	4703303734	HARRISON	James D Sexton Jr	Enervest Operating, LLC	Greenland Gap Fm	Gas	5,058	ACTIVE	39.176493	-80.465788
41	4703303919	HARRISON	Charles N Tyre etux	Berry Energy Inc.	Greenland Gap Fm	Gas	4,650	ACTIVE	39.182611	-80.457101
42	4703304183	HARRISON	Jean P Rapking	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4,558	ACTIVE	39.188411	-80.451886
43	4703304376	HARRISON	June S Hanner	Consol Gas Co.	Greenland Gap Fm	Gas	4,700	ACTIVE	39.191457	-80.462248
44	4703304641	HARRISON	William B Ferrell Jr	Dominion Energy Transmission Inc.	Benson	Gas	4,264	ACTIVE	39.151966	-80.437340
45	4703304698	HARRISON	John E Paugh Jr	Dominion Energy Transmission Inc.	Price Fm & equivs	Gas	1,488	ACTIVE	39.158347	-80.444606
46	4703304991	HARRISON	John E Jr & Lee M Paugh	Dominion Energy Transmission Inc.	Weir	Gas	1,503	ACTIVE	39.154867	-80.442184
47	4703305032	HARRISON	James S. Jenkins	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4,450	ACTIVE	39.188266	-80.456545
48	4703305037	HARRISON	Post Heritage LLC	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	5,126	ACTIVE	39.186816	-80.448904
49	4703305038	HARRISON	Nay's Riverbend Farm Inc	Dominion Energy Transmission Inc.	Weir	Gas	1,428	ACTIVE	39.151241	-80.443300
50	4703305162	HARRISON	Sharon S McDonald	Dominion Energy Transmission Inc.	Weir	Gas	1,640	PLUGGED	39.160078	-80.454245
51	4703305332	HARRISON	Nay's Riverbend Farm Inc	Dominion Energy Transmission Inc.	Big Injun (Grnbr)	Gas	1,469	ACTIVE	39.151781	-80.446467
52	4703305333	HARRISON	Nay's Riverbend Farm Inc	Consol Gas Co.	WELL WAS NOT DRILLED				39.152819	-80.449784
53	4703305351	HARRISON	William M McDonald	Consol Gas Co.	WELL WAS NOT DRILLED				39.174766	-80.456970
54										

SOURCE: WVGES DATASET (2017) and WVDEP WEBSITE

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HG Energy II Appalachia, LLC

Site Safety Plan

**1209 Unit Well Pad
327 Gooseman Rd Jane Lew
Harrison County, WV 26378**

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May 2018: Version 1

WV Department of
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**For Submission to
West Virginia Department of Environmental Protection,
Office of Oil and Gas**

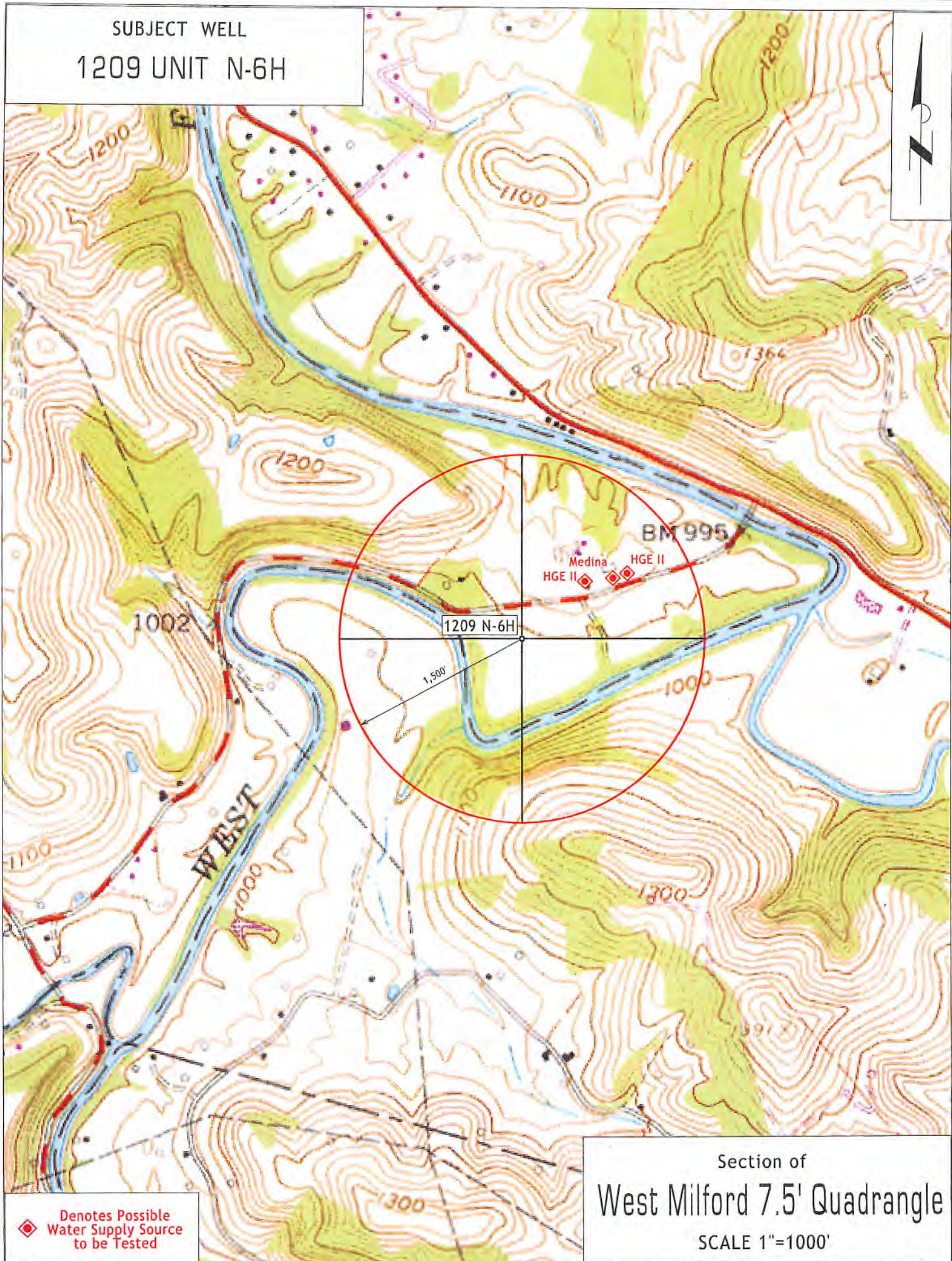
SPW
10/22/2018

HG Energy II Appalachia, LLC

5260 Dupont Road

Parkersburg, WV 26101

SUBJECT WELL
1209 UNIT N-6H



◆ Denotes Possible
Water Supply Source
to be Tested

Section of
West Milford 7.5' Quadrangle
SCALE 1"=1000'

BHL is located on topo map 6,745 feet south of Latitude: 39°12'30"
 SHL is located on topo map 6,791 feet south of Latitude: 39°10'00"

BHL is located on topo map 10,119 feet west of Longitude: 80°25'00"
 SHL is located on topo map 7,600 feet west of Longitude: 80°25'00"

SEE PAGE 2 FOR PLAT DUE TO LENGTH OF LATERAL
SEE PAGE 3 FOR SURFACE OWNERS

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
 N:4333350.30
 E:548091.02
 UTM 17-NAD83(FT)
 N:14217000.10
 E:1798195.30
 LAT/LON DATUM-NAD83
 LAT:39.148021
 LON:-80.443464

APPROX. LANDING POINT
UTM 17-NAD83(M)
 N:4333764.31
 E:548847.34
 UTM 17-NAD83(FT)
 N:14218358.40
 E:1800676.67
 LAT/LON DATUM-NAD83
 LAT:39.151709
 LON:-80.434682

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
 N:4337983.53
 E:547293.58
 UTM 17-NAD83(FT)
 N:14232200.96
 E:1795579.01
 LAT/LON DATUM-NAD83
 LAT:39.189813
 LON:-80.452368

	LESSOR	DIST-TM/PAR
A	J. B. GUSMAN ET AL	20-444/11.2 12-444/13 12-444/14
B	EDMOND SOUTHERN ET UX	12-424/51
C	L. B. MAXWELL ET AL	12-424/52.1
D	PAUL S. HORNOR ET AL	12-424/45.8
E	WM BURNSIDE ET AL	12-424/46 12-424/45.5 12-424/27.1 12-424/56 12-424/45.6 12-424/45.1 12-424/27 12-424/25 12-424/24 12-424/20 12-424/4 12-424/45.2
F	WILLIAM BURNSIDE ET AL	12-424/3 12-424/5
G	WILLIAM AND RUHAMA BURNSIDE	12-424/2 20-404/57
H	J P POST ET AL	20-404/43 20-404/32.2 20-404/32.1 20-404/32.7 20-404/32.6 20-404/32



LEGEND

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- MINERAL TRACT BOUNDARY
- LESSORS
- SURFACE OWNERS
- PARCEL LINES
- LEASE BOUNDARY
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- DETAIL

WELLS WITHIN 2400'

- EXISTING WELLS
- PLUGGED WELLS
- ABANDONED WELLS

Blue Mountain
 11023 MASON DIXON HIGHWAY
 BURTON, WV 26562
 PHONE: (304) 662-6486

FILE #: 1209 N-6H
 DRAWING #: 1209 N-6H
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: *George D. Six*
 R.P.E.: _____ L.L.S.: P.S. No. 2000

GEORGE D. SIX
LICENSED
No. 2000
STATE OF
WEST VIRGINIA
PROFESSIONAL SURVEYOR

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



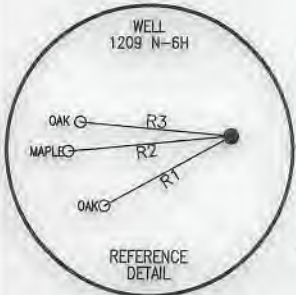
DATE: OCTOBER 24, 2018
 OPERATOR'S WELL #: 1209 N-6H
 API WELL #: 47 33 05939
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: MIDDLE WEST FORK CREEK ELEVATION: 1,007'±
 COUNTY/DISTRICT: HARRISON / UNION QUADRANGLE: WEST MILFORD, WV 7.5'
 SURFACE OWNER: HG ENERGY II APPALACHIA, LLC ACREAGE: 95.06±
 OIL & GAS ROYALTY OWNER: ANN COVINGTON, ET AL ACREAGE: 1014.105±
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____
 TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,900'± TMD: 23,029'±
 WELL OPERATOR HG ENERGY II APPALACHIA, LLC DESIGNATED AGENT DIANE C. WHITE
 Address 5260 DUPONT ROAD Address 5260 DUPONT ROAD
 City PARKERSBURG State WV Zip Code 26101 City PARKERSBURG State WV Zip Code 26101

1209 N-6H

PAGE 2 OF 3



LEGEND

- TOPO MAP POINT
- WELL
- ALL ARE POINTS UNLESS OTHERWISE NOTED.
- MINERAL TRACT BOUNDARY
- LESSORS
- SURFACE OWNERS
- PARCEL LINES
- LEASE BOUNDARY
- WELL REFERENCE
- PROPOSED HORIZONTAL WELL
- ROAD
- STREAM CENTER LINE
- DETAIL

WELLS WITHIN 2400'

- EXISTING WELLS
- PLUGGED WELLS
- ABANDONED WELLS

LINE	BEARING	DISTANCE
R1	S 61°24'30" W	210.22'
R2	S 84°26'52" W	238.89'
R3	N 85°04'14" W	221.02'
R4	N 03°50'57" E	1697.54'
R5	N 62°51'54" W	822.97'
R6	S 06°04'07" W	833.90'

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
N:433350.30
E:548091.02
 UTM 17-NAD83(FT)
 N:14217000.10
 E:1798195.30
 LAT/LON DATUM-NAD83
 LAT:39.148021
 LON:-80.443464

APPROX. LANDING POINT
UTM 17-NAD83(M)
N:4333764.31
E:548847.34
 UTM 17-NAD83(FT)
 N:14218358.40
 E:1800676.67
 LAT/LON DATUM-NAD83
 LAT:39.151709
 LON:-80.434682

BOTTOM HOLE LOCATION (BHL)
UTM 17-NAD83(M)
N:4337983.53
E:547293.58
 UTM 17-NAD83(FT)
 N:14232200.96
 E:1795579.01
 LAT/LON DATUM-NAD83
 LAT:39.189813
 LON:-80.452368

- NOTES:
- There are no water wells or developed springs within 250' of proposed well.
 - There are no existing buildings within 625' of proposed well.
 - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 - There are no native trout streams within 300' of proposed well.
 - Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
 - It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, are based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

OCTOBER 24, 2018



George D. Six

1209 N-6H

PAGE 3 OF 3

	SURFACE OWNER	DIST-TM/PAR
1	DANNY LEE & ALICIA A. STICKEL	P/O 20-444/11.2
1A	HG ENERGY II APPALACHIA, LLC	P/O 20-444/11.2
2	HG ENERGY II APPALACHIA, LLC	20-444/11.3
3	AARON C. & CHRISTINA P. MEDINA	20-444/11
4	HG ENERGY II APPALACHIA, LLC	20-444/11.1
5	WILLIAM BRUCE, JR. & CONNIE C. FERRELL	12-444/13
6	ROBERT J. BRIGHTBILL	12-444/14
7	ROBERT J. BRIGHTBILL	12-424/51.3
8	JOHN E., JR. & LEE M. PAUGH	12-424/51
9	JOHN E., JR. & LEE M. PAUGH	12-424/52.4
10	ROBERT J. BRIGHTBILL	12-424/52.1
11	EDWARD MICHAEL BODKIN	12-424/46
12	GREGORY J. & KIMBERLY D. BODKIN	12-424/45.8
13	EARL J. & CHARLOTTE HEATER	12-424/45.5
14	STACI M. COTTRILL & D. DAVIS MICKY	12-424/45.6
15	*CHARLOTTE ANN HEATER	12-424/56
16	STACI M. COTTRILL & MICKY D. DAVIS	12-424/45.2
17	KAZIMIER A. & PAMELA L. KAPIS	12-424/45.1
18	GREATER HARRISON COUNTY PUBLIC SERVICE DISTRICT	12-424/27.1
19	VIVIAN K. ABLES	12-424/27
20	GARY R. & CHYRL L. DRUMMOND	12-424/54
21	CARL R. KROSMICO	12-424/25
22	CARL R. KROSMICO	12-424/24
23	CARL R. KROSMICO	12-424/20
24	JOE M. & KAREN S. GONZALEZ	12-424/4
25	LISA D. GOFF	12-424/3
26	JOSEPH HARRY MASON	12-424/5
27	WILLIAM MICHAEL MCDONALD	12-424/2
28	GREATER HARRISON COUNTY PUBLIC SERVICE DISTRICT	20-404/58
29	PERRY LEE & DEBORAH JEAN POST	20-404/57
30	PERRY LEE & DEBORAH JEAN POST	20-404/43
31	JASON A. & JENNIFER E. POST	20-404/43.8
32	MORRELL E., JR. & MAJORIE R. RAPKING	20-404/32.2
33	PATRICIA R. & WILLIAM T. DOUGLAS	20-404/32.10
34	MORRELL EDWARD, JR. & MAJORIE R. RAPKING	20-404/32.7
35	NANCY JEAN MURPHY	20-404/32.6
36	POST HERITAGE LLC	20-404/32

* - DENOTES PARCEL WITHIN 30 FEET OF PLANNED WELL BORE

SURFACE HOLE LOCATION (SHL)
UTM 17-NAD83(M)
N:4333350.30
E:548091.02
UTM 17-NAD83(FT)
N:14217000.10
E:1798195.30
LAT/LON DATUM-NAD83
LAT:39.148021
LON:-80.443464

APPROX. LANDING POINT
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UTM 17-NAD83(FT)
N:14232200.96
E:1795579.01
LAT/LON DATUM-NAD83
LAT:39.189813
LON:-80.452368

OCTOBER 24, 2018

WW-6A1
(5/13)

Operator's Well No. Nays 1209 N-6H

**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 Sheets"

RECEIVED
Office of Oil and Gas

NOV 14 2018

WV Department of
Environmental Protection

**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

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 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

WW-6A1
(5/13)

Operator's Well No. Nays 1209 N-6H

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Well Operator: HG Energy II Appalachia, LLC

By: Diane White *Diane White*

Its: Agent

1209 N-6H LEASE CHAIN - HG Energy II Appalachia, LLC

TRACT #	LEGACY LEASE NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE				
A	FK020606	17-20-0444-0011-0000, 17-20-0444-0011-0001, 17-20-0444-0011-0002, 17-20-0444-0011-0003, 17-20-0444-0012-0000, 17-12-0444-0013-0000, 17-12-0444-0014-0000, 17-12-0444-0021-0000, 17-12-0444-0021-0001, 17-12-0444-0022-0000, 17-12-0445-0001-0000, 17-12-0445-0002-0000, 17-12-0445-0009-0000, 17-12-0445-0010-0000, 17-12-0445-0011-0000	Q100370000	J.B. GUSMAN AND ADALINE GUSMAN	TREAT AND CRAWFORD	NOT LESS THAN 1/8	158	8				
				TREAT AND CRAWFORD	UNITED FUEL GAS COMPANY	ASSIGNMENT	226	359				
				UNITED FUEL GAS COMPANY	FAYETTE COUNTY GAS COMPANY	ASSIGNMENT	UNRECORDED					
				FAYETTE COUNTY GAS COMPANY	HOPE NATURAL GAS	ASSIGNMENT	201	3				
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY COMPANY	MERGER/NAME CHANGE	903	179				
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250				
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795				
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362				
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1409	680				
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1442	356				
				DOMINION EXPLORATION & PRODUCTION, INC.	DOMINION TRANSMISSION, INC.	ASSIGNMENT	1457	978				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33				
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125				
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942				
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692				
				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	581				
				C	FK065462	17-12-0424-0052-0000 17-12-0424-0052-0001 17-12-0424-0052-0002 17-12-0424-0052-0003 17-12-0424-0052-0004 p/o 17-12-0425-0031-0000 p/o 17-12-0425-0031-0003 17-12-0425-0032-0000 p/o 17-12-0425-0033-0000 17-12-0425-0033-0001 17-12-0425-0033-0002 17-12-0425-0033-0003 p/o 17-12-0425-0033-0004 17-12-0425-0033-0005	Q101063000	L. BASSELL MAXWELL AND BLONDA MAXWELL, HIS WIFE; AND, JANE M. HENDERSON, WIDOW	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	745	5
								HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	179
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136					250				
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51					795				
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58					362				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	1522					33				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543					1245				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576					125				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584					942				
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									
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601					581				
		17-12-424-0044-0000 17-12-424-0051-0000 17-12-424-0051-0001 17-12-424-0051-0002 17-12-424-0051-0004 17-20-444-0006-0000 17-20-444-0006-0001 17-20-444-0006-0002 17-20-444-0006-0004 17-20-444-0006-0005 17-20-444-0007-0001 17-20-444-0008-0000		EDMOND SOUTHERN AND MARTHA W. SOUTHERN, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	149	307				
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	179				
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250				
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795				
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33				

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Dominion Energy Transmission

4703305939

B	FK004884	17-20-444-0006-0000	Q100457000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235		
		17-20-444-0009-0000		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125		
		17-20-444-0010-0000		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942		
		17-20-444-0056-0000		NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660		
		17-12-2002-0024-0000		NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692		
		17-12-2002-0024-0001		DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS			
		17-12-2002-0024-0001		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581 ✓		
		17-12-2002-0025-0000								
		17-12-2002-0026-0000								
17-12-2002-0027-0000										
17-12-2002-0028-0000										
17-12-2002-0024-0031										
RECEIVED Office of Oil and Gas	NOV 14 2018	WV Department of Environmental Protection	FK001785	17-12-0424-0045-0000	PAUL S. HORNER AND MARY H. HORNER, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	696	249	
				17-12-0424-0045-0002	HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY COMPANY	MERGER/NAME CHANGE	903	179	
				17-12-0424-0045-0003	p/o 17-12-0424-0045-0007	CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
				17-12-0424-0045-0006	17-12-0424-0045-0009	CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
				17-12-0424-0045-0008	17-12-0424-0043-0002	CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
				17-12-0424-0043-0004	17-12-0424-0043-0005	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
				17-12-0424-0043-0006	17-12-0424-0043-0006	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1524	491
				17-12-2002-0010-0001	17-12-2002-0010-0003	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
				17-12-2002-0010-0004	17-12-2002-0010-0006	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
				17-12-2002-0019-0000	17-12-2002-0020-0000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
				17-12-2002-0021-0000	17-12-2002-0022-0000	NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
				17-12-2002-0023-0000	17-12-2002-0023-0000	NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692
				17-12-2002-0029-0000	17-12-2002-0023-0000	DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				17-12-2002-0023-0000		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581 ✓
				17-12-0405-0075-0000						
				17-12-2001-0017-0001						
17-12-2001-0017-0002										
17-12-2001-0018-0001										
17-12-2001-0018-0003										
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17-12-2001-0018-0002										
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17-12-2001-0022-0001										
17-12-2001-0023-0000										
17-12-2001-0023-0001										
17-12-2001-0024-0000										
17-12-2001-0033-0000										
				WM. BURNSIDE AND RUHARY BURNSIDE, HIS WIFE, AKA RLUHAMA BURNSIDE	E.J. WEST (212 ACRES)	NOT LESS THAN 1/8	118	353		
				E.J. WEST	CONSOLIDATED OIL COMPANY	ASSIGNMENT	118	358		
				CONSOLIDATED OIL COMPANY	E.C. BEARDSLEY	ASSIGNMENT	207	465		

1209N LEASE CHAIN

17-12-2001-0034-0000
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 17-12-2001-0037-0000
 17-12-2001-0038-0000
 17-12-2001-0039-0000
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 17-12-2001-0070-0000
 17-12-2001-0070-0001
 17-12-2001-0076-0000

E

LC098343

Q101084000

E.C. BEARDSLEY	THE WHEELING NATURAL GAS COMPANY	ASSIGNMENT	207	419
THE WHEELING NATURAL GAS COMPANY, TRI STATE GAS COMPANY AND THE MANUFACTURERS LIGHT AND HEAT COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	202	375
JOSEPH CHEUVRONT, CHARLES CHEUVRONT, AND HARRIET CHEUVRONT	P.H. GAFFNEY (200 ACRES)	NOT LESS THAN 1/8	184	309
E.F. WILLIAMSON AND P.H. GAFFNEY DOING BUSINESS AS F.E. WILLIAMSON & CO.,	J.F. DONALDSON	ASSIGNMENT	222	83
J.F. DONALDSON	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	222	79
THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	236	111
PITTSBURGH AND WEST VIRGINIA GAS COMPANY	PHILADELPHIA OIL COMPANY	ASSIGNMENT	504	353
PITTSBURGH AND WEST VIRGINIA GAS COMPANY	EQUITABLE GAS COMPANY	CONVEYANCE	714	159
EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	790	135
HOPE NATURAL GASA COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION (212 & 200 AC)	MERGER/NAME CHANGE	903	179

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17-12-2001-0077-0000
17-12-2001-0078-0000
17-12-2001-0079-0000
17-12-2001-0080-0000
17-12-2001-0081-0000
17-12-2001-0082-0000
17-12-2001-0083-0000
17-12-2001-0084-0000
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17-12-0424-0018-0000
17-12-0424-0018-0002
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17-12-0424-0045-0001
17-12-0424-0045-0002
17-12-0424-0045-0005
17-12-0424-0045-0006
17-12-0424-0045-0007
17-12-0424-0045-0008
17-12-0424-0046-0000
17-12-0424-0053-0000
17-12-0424-0053-0001
17-12-0424-0053-0002

CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATOIN	ASSIGNMENT	1136	250
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1524	491
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692

		17-12-0424-0053-0003 17-12-0424-0053-0004 17-12-0424-0054-0000 17-12-0424-0055-0000 17-12-0424-0055-0001 17-12-0424-0055-0002 17-12-0424-0055-0003 17-12-0424-0056-0000 17-12-0424-0057-0000 17-12-0424-0058-0000		DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC	MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	WVSOS 1601	581
F	LC021484	RECEIVED Office of Oil and Gas NOV 14 2008 WV Department of Environmental Protection	Q101085000	WILLIAM AND RUHAMA BURNSIDE E. J. WEST CONSOLIDATED OIL COMPANY E.C. BEARDSLEY THE WHEELING NATURAL GAS COMPANY, TRI STATE GAS COMPANY AND THE MANUFACTURERS LIGHT AND HEAT COMPANY HOPE NATURAL GASA COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC.	E. J. WEST CONSOLIDATED OIL COMPANY E.C. BEARDSLEY THE WHEELING NATURAL GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION (212 & 200 AC) CONSOLIDATED GAS TRANSMISSION CORPORATOIN CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8 ASSIGNMENT ASSIGNMENT ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM FARMOUT AGREEMENT FIRST AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	118 118 207 207 202 903 1136 51 58 1522 1524 1543 1576 1584 1600 1600 1601	360 358 465 419 375 179 250 795 362 33 491 1235 125 942 660 692 581
G	FK052931	17-20-0404-0049-0000 17-20-0404-0057-0000 17-20-0404-0058-0000 17-20-0424-0002-0000		WILLIAM AND RUHAMA BURNSIDE RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY FAYETTE COUNTY GAS COMPANY W.B. BERRY CONSOLIDATED GAS SUPPLY CORPORATION J&J ENTERPRISES, BENSON DRILLING ASSOCIATION NO. 1 CONSOLIDATED GAS TRANSMISSION CORPORATION J&J ENTERPRISES ENSOURCE, INC. EASTERN AMERICAN ENERGY CORPORATION CNG TRANSMISSION CORPORATION BENSON DRILLING ASSOCIATES JV1 UMC PETROLEUM CORPORATION ASHLAND EXPLORATION HOLDINGS, INC. BLAZER ENERGY CORP., EASTERN STATES OIL AND GAS, INC. EASTERN STATES EXPLORATION COMPANY, EASTERN SEVEN, LLC BLAZER ENERGY CORP., EASTERN STATES OIL AND GAS, INC. EASTERN STATES EXPLORATION COMPANY, EASTERN SEVEN, LLC	RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION HOPE NATURAL GAS J&J ENTERPRISES CONSOLIDATED GAS TRANSMISSION CORPORATION ENSOURCE, INC. CNG TRANSMISSION CORPORATION EASTERN AMERICAN ENERGY CORPORATION UMC PETROLEUM CORPORATION UMC PETROLEUM CORPORATION UMC PETROLEUM CORPORATION UMC PETROLEUM CORPORATION ASHLAND EXPLORATION, INC. BLAZER ENERGY CORPORATION EASTERN SERIES 1997 TRUST EASTERN SERIES 1997 TRUST	NOT LESS THAN 1/8 MERGER/NAME CHANGE MERGER/NAME CHANGE ASSIGNMENT ASSIGNMENT ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MERGER/NAME CHANGE MERGER/NAME CHANGE CONSENT TO ASSIGNMENT ASSIGNMENT ASSIGNMENT ASSIGNMENT ASSIGNMENT ASSIGNMENT	193 37 903 201 1065 1136 1187 51 1200 1226 1226 1262 1263 1294 1296 1309	444 350 179 3 271 250 246 795 1110 1040 1009 399 494 299 909 463

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			EASTERN SEVEN, LLC, EQUITABLE PRODUCTION - EASTERN STATES, INC., EQUITABLE PRODUCTION - EASTERN EXPLORATION, INC. FKA EASTERN STATES EXPLORATION COMPANY, EASTERN SEVEN PARTNERS, LP	EASTERN SERIES 1997 TRUST	CORRECTIVE ASSIGNMENT AND STIPULATION OF INTEREST	1324	156
			EASTERN SEVEN, INC.	EASTERN STATES OIL & GAS, INC.	ASSIGNMENT	1316	562
			EASTERN STATES OIL AND AS, INC.	BLAZER ENERGY CORPORATION	MERGER/NAME CHANGE	58	98
			CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION CORPORATION	MERGER/NAME CHANGE	59	1227
			DOMINION TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	Third Amendment to Farmout Agreement	1621	1295
		17-20-0404-0032-0000 17-20-0404-0032-0001 17-20-0404-0032-0002 17-20-0404-0032-0003 17-20-0404-0032-0004 17-20-0404-0032-0005 17-20-0404-0032-0006 17-20-0404-0032-0007 17-20-0404-0032-0009 17-20-0404-0032-0010 17-20-0404-0033-0000 17-20-0404-0033-0001 17-20-0404-0033-0002 17-20-0404-0033-0003 17-20-0404-0033-0004 17-20-0404-0033-0005 17-20-0404-0033-0006 17-20-0404-0042-0000 17-20-0404-0043-0000 17-20-0404-0043-0001 17-20-0404-0043-0002 17-20-0404-0043-0003 17-20-0404-0043-0004 17-20-0404-0043-0005 17-20-0404-0043-0006 17-20-0404-0043-0007 17-20-0404-0043-0008 17-20-0404-0001-0000 17-20-0404-0002-0000 17-20-0404-0003-0000 17-20-0404-0004-0000 17-20-0404-0005-0000 17-20-0404-0006-0000 17-20-0404-0007-0000 17-20-0404-0008-0000 17-20-0404-0009-0000 17-20-0404-0010-0000 17-20-0404-0011-0001 17-20-0404-0012-0000 17-20-0404-0013-0000 17-20-0404-0014-0000 17-20-0404-0015-0000 17-20-0404-0016-0000 17-20-0404-0016-0001 17-20-0404-0016-0002	J.P. POST AND F.C. POST, HIS WIFE	RESERVE GAS COMPANY	NOT LESS THAN 1/8		214
			RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	MERGER/NAME CHANGE	508	573
			HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903	179
			CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
			CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
			CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
			DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	MERGER/NAME CHANGE	1325	874
			DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1427	829
			DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
			CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
			DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
			CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
			NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
			NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692

		17-20-0404-0016-0003 17-20-0404-0016-0004 17-20-0404-0016-0005 17-2901-0218-0000	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	581 ✓

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 Environmental Protection



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

November 1, 2018

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

RE: Drilling Under Roads – Nays 1209 N-6H
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

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

Date of Notice Certification: 10/25/2018

API No. 47-033 - 05939
Operator's Well No. Nays 1209 N-6H
Well Pad Name: Nays 1209

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>548091.0</u>
County: <u>Harrison</u>	Northing: <u>4333350.3</u>
District: <u>Union</u>	Public Road Access: <u>Kincheloe Run Road / SR35</u>
Quadrangle: <u>West Milford 7.5'</u>	Generally used farm name: <u>Nays</u>
Watershed: <u>West Fork</u>	

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 100px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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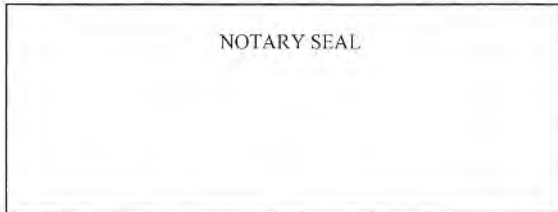
WV Department of
Environmental Protection

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.

Certification of Notice is hereby given:

THEREFORE, I Diane White, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>HG Energy II Appalachia, LLC</u>	Address:	<u>5260 Dupont Road</u>
By:	<u>Diane White <i>Diane White</i></u>		<u>Parkersburg, WV 26101</u>
Its:	<u>Agent</u>	Facsimile:	<u>304-863-3172</u>
Telephone:	<u>304-420-1119</u>	Email:	<u>dwhite@hgenergyllc.com</u>



Subscribed and sworn before me this 25th day of October, 2018

Notary Public

My Commission Expires _____

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.

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WW-6A
(9-13)

API NO. 47- _____
OPERATOR WELL NO. Nays 1209 N-6H
Well Pad Name: Nays 1209

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: 11/05/2018 **Date Permit Application Filed:** 11/09/18

Notice of:

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

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.

Application Notice WSSP Notice E&S Plan Notice Well Plat Notice is hereby provided to:

SURFACE OWNER(s)
 Name: HG Energy II Appalachia, LLC
 Address: 5260 Dupont Road
Parkersburg, WV 26101

Name: _____
 Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
 Name: HG Energy II Appalachia, LLC
 Address: 5260 Dupont Road
Parkersburg, WV 26101

Name: _____
 Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
 Name: HG Energy II Appalachia, LLC
 Address: 5260 Dupont Road
Parkersburg, WV 26101

COAL OWNER OR LESSEE
 Name: NA
 Address: _____

COAL OPERATOR
 Name: NA
 Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
 Name: HG Energy II Appalachia, LLC
 Address: 5260 Dupont Road
Parkersburg, WV 26101

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
 Name: Dominion Energy Transmission - Attn: Ronald Walden
 Address: 925 White Oaks Blvd
Bridgeport, WV 26330

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*Please attach additional forms if necessary

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.wv.gov/oil-and-gas/pages/default.aspx.

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 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

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 comments as to the location or construction 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

Office of Oil and Gas

NOV 14 2013

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.**

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.

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WW-6A
(8-13)

API NO. 47- _____
OPERATOR WELL NO. Nays 1209 N-6H
Well Pad Name: Nays 1209

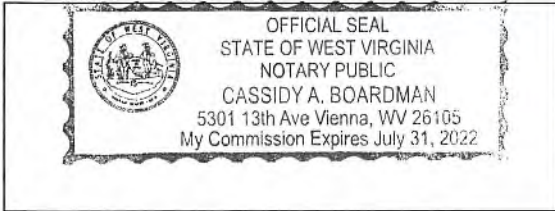
Notice is hereby given by:

Well Operator: HG Energy II Appalachia, LLC
Telephone: 304-420-1119
Email: dwhite@hgenergyllc.com *Aiane White*

Address: 5260 Dupont Road
Parkersburg, WV
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.



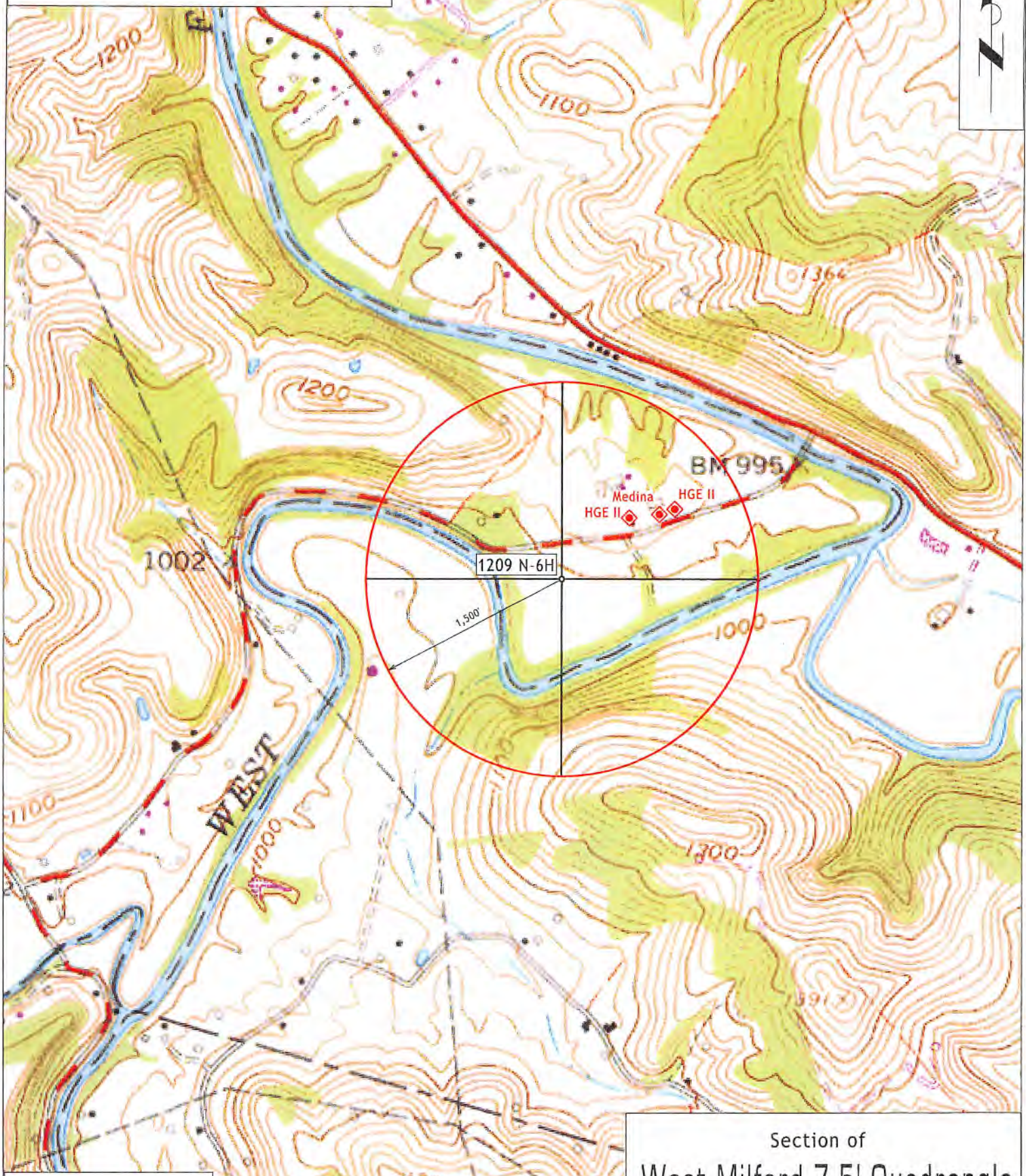
Subscribed and sworn before me this 2nd day of November, 2018.

Cassidy A. Boardman Notary Public

My Commission Expires 7/31/2022

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WV Department of
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SUBJECT WELL
1209 UNIT N-6H



◆ Denotes Possible
Water Supply Source
to be Tested

Section of
West Milford 7.5' Quadrangle
SCALE 1"=1000'

WW-6A
(8-13)

Cone 1209 N-6H

Page 1 Continued

Surface Owner of Water Well and/or Water Purveyors to be Noticed:

Aaron & Christina Medina ✓
314 Gooseman Road
Jane Lew, WV 26378

*** Timothy Butcher
244 Gooseman Road
Jane Lew, WV 26378

*Sold
to
HG 7/2018*

** Danny & Alicia Stickel ✓
1404 Kincheloe Road
Jane Lew, WV 26378

NOTES

*** Mr. Butcher sold his property to HG Energy II
Appalachia, LLC, July 2018.

** The well located on Mr. Stickel's property can't be
accessed, it's sealed. There aren't any other water sources
to be tested.

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Diane White

From: Missy Hoops <mhoops@sturmenvironmental.com>
Sent: Tuesday, July 10, 2018 1:05 PM
To: Diane White
Subject: Re: Water Sampling at the 1209 Well Site in Harrison County

You're welcome!

On 7/10/2018 12:55 PM, Diane White wrote:

Thank you very much!

½

From: Missy Hoops [<mailto:mhoops@sturmenvironmental.com>]
Sent: Tuesday, July 10, 2018 12:43 PM
To: Diane White <dwhite@hgenergyllc.com>
Subject: Re: Water Sampling at the 1209 Well Site in Harrison County

½

He said there is a well, but it is sealed.

½

On 7/10/2018 12:15 PM, Diane White wrote:

Could you ask him if he remembers if there was a water source by the house?
Or on property? The house isn't occupied; it's old/deserted from what I understand.

I'm trying to determine if there is a well on the property.

At the time Cone owned the property, then HG purchased it and now it's owned by Danny Stickel.

Thanks,

Diane

--

Thank you,
½
Missy Hoops
Sturm Environmental Services
P.O. Box 650
Bridgeport, WV 26330
(304) 623-6549 Phone
(304) 623-6552 Fax

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WV Department of
Environmental Protection

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

Notice Time Requirement: notice shall be provided no later than the **filing date of permit application.**

Date of Notice: 10/31/2018 **Date Permit Application Filed:** 11/09/2018

Delivery method pursuant to West Virginia Code § 22-6A-16(c)

CERTIFIED MAIL HAND *
RETURN RECEIPT REQUESTED DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

Notice is hereby provided to the SURFACE OWNER(s) *
(at the address listed in the records of the sheriff at the time of notice):

Name: HG Energy II Appalachia, LLC
Address: 5260 Dupont Road
Parkersburg, WV 26101

Name: _____
Address: _____

RECEIVED
Office of Oil and Gas
NOV 13 2018
WV Department of
Environmental Protection

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: West Virginia UTM NAD 83 Easting: 548091.0
County: Harrison Northing: 4333350.3
District: Union Public Road Access: Kincheloe Run Road/ SR35
Quadrangle: Audra 7.5' Generally used farm name: Cone
Watershed: Elk Creek

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. 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.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator: HG Energy II Appalachia, LLC
Telephone: 304-420-1119
Email: dwhite@hgenergyllc.com

Address: 5260 Dupont Road
Parkersburg, WV 26101
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.

* Notice was not sent because HG Energy II Appalachia, LLC is the owner of the surface property and the Operator submitting the well work application.



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

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

November 1, 2018

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 Nays 1209 Well Pad, Harrison County
 N-6H Well Site

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 Environmental Protection

Dear Mr. Martin,

This well site will be accessed from Permit #04-2018-0673 issued to HG Energy II Appalachia for access to the State Road for a well site located off of Harrison County 35 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 January 3, 2012.

Very Truly Yours,

Gary K. Clayton, P.E.
 Regional Maintenance Engineer
 Central Office O&G Coordinator

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

List of Frac Additives by Chemical Name and CAS #**Nays 1209 Well Pad (N-1H to N-6H, S-7H to S-12H)**

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	

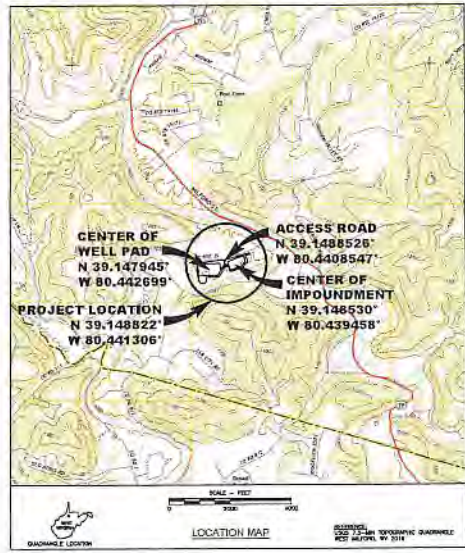
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CONSTRUCTION IMPROVEMENT PLANS WITH EROSION AND SEDIMENT CONTROLS

HG 1209 PAD & IMPOUNDMENT



UNION DISTRICT
HARRISON COUNTY
WEST VIRGINIA



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

Estimated Gross Material Balance (CY)		
Final Development - Gravel/Culvert		
Cut	Fill	Stockpile
18,751	5,208	31,888
Production	14,737	32,217
Wash	364	458
Tank	6,026	24,027
Soil Adjustment for Aggregate Import		
Imp		2,329
Total Site Balance		
Stockpiled Topsoil (meter Displacement)		14,827
Est. Sand Factor	(20%)	2,811
Est. Topsoil Storage Volume (cubic Yds)		16,998
Minimum Total Stockpile Capacity Required (CY)		17,919
Notes:		
1. Material balance for est. gross construction quantities only.		
2. Topsoil est. volume based on 6 inches average depth.		
3. Material balance was aggregate based on estimated quantities and may not be representative of actual quantities.		
4. Estimate obtained from contractor pay volumes.		
Estimated Demand Quantities (Flood CY)		
Gravel Quantities:	Wash from 2 1/2" Screen	Fill
2" Drainage Run	385	6,361
2" Drainage Run	2,367	2,367
Top Drain Chert & Sand (Flood 80)	777 sq. ft.	1,277 cu. yd.
Estimated Demand Filter Sand Length (ft)	3,400	1,320
Estimated Demand Filter Sand Length (ft)		4,782
Estimated Total Limit of Disturbance (Acres)		17,426
Estimated Maximum Limit of Disturbance (Acres)		6,848
Estimated Well Pad & Impoundment Disturbance (Acres)		11.47
Well Pad Final Pile Construction Elevation (ft)		1023.9

SHT. NO.	SHEET TITLE
1	TITLE SHEET
2A-2C	SITE LAYOUT PLANS
3	PAD & IMPOUNDMENT SECTIONS
4	ACCESS ROAD SECTIONS
5A-5F	GENERAL NOTES & DETAILS
6	RESTORATION PLAN
7	PROPERTY MAP

RECORD OWNER	RECORD LOT #	RECORD AREA OF LOT	AREA WITHIN LOD
HG ENERGY II APPALACHIA, LLC	20-444-11.2	95.06 AC.	17,426 AC.
TOTAL LIMIT OF DISTURBANCE			17,426 AC.

	LATITUDE	LONGITUDE
1209 PAD & IMPOUNDMENT ENTRANCE	N 39.148822E	W 80.440854E

WELL #	LAT.	LONG.
N-1H	N 39.147868	W 80.443456
N-2H	N 39.147938	W 80.443456
N-3H	N 39.147980	W 80.443481
N-4H	N 39.148103	W 80.443470
N-5H	N 39.148062	W 80.443467
N-6H	N 39.148021	W 80.443464
N-7H	N 39.148029	W 80.443299
N-8H	N 39.147988	W 80.443296
N-9H	N 39.147948	W 80.443294
N-10H	N 39.148970	W 80.443332
N-11H	N 39.148111	W 80.442306
N-12H	N 39.148152	W 80.442308

- 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 delineate sensitive areas, riparian 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 erosion 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, stockpiles.
 - 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 downlope 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 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 - Topsoiling, 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.

Office of Oil and Gas
NOV 14 2018
WV Department of Environmental Protection

THIS DRAWING IS UNAPPROVED. THE DRAWING IS A "PLOT" AND NOT A "PRINT". THE DRAWING IS THE PROPERTY OF THE DRAWER AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE DRAWER. THE DRAWING IS NOT TO BE USED FOR ANY OTHER PROJECT OR PURPOSE WITHOUT THE WRITTEN PERMISSION OF THE DRAWER.

REVISION	DATE	DESCRIPTION
1	3/23/18	ADD PROPERTY MAP, ADJUSTMENTS PER DEP COMMENTS
2	6/26/18	REVISE DRAINAGE REGIONS, ADD DRAINAGE CANALS, ADJUST PROFILES
3	6/12/18	IMPOUNDMENT REVISIONS, ADJUSTED BEE BALANCE, AND PROFILES
4	7/10/18	ADJUST DRAINAGE PER DEP COMMENTS
5	10/20/18	ADD WEIR TO IMPOUNDMENT, REVISE PROFILES, ADD WEIR TO IMPOUNDMENT
6	10/12/18	ADJUSTMENTS TO SHEET PER DEP COMMENTS, ADD WEIR TO IMPOUNDMENT



TITLE SHEET
HG 1209 PAD & IMPOUNDMENT
UNION DISTRICT
HARRISON COUNTY, WEST VIRGINIA

PREPARED FOR
HG ENERGY II APPALACHIA, LLC
PARKERSBURG, WEST VIRGINIA

WEST VIRGINIA **CALL BEFORE YOU DIG!**

Dial 811 or 800.245.4848
www.dial811.wv.gov

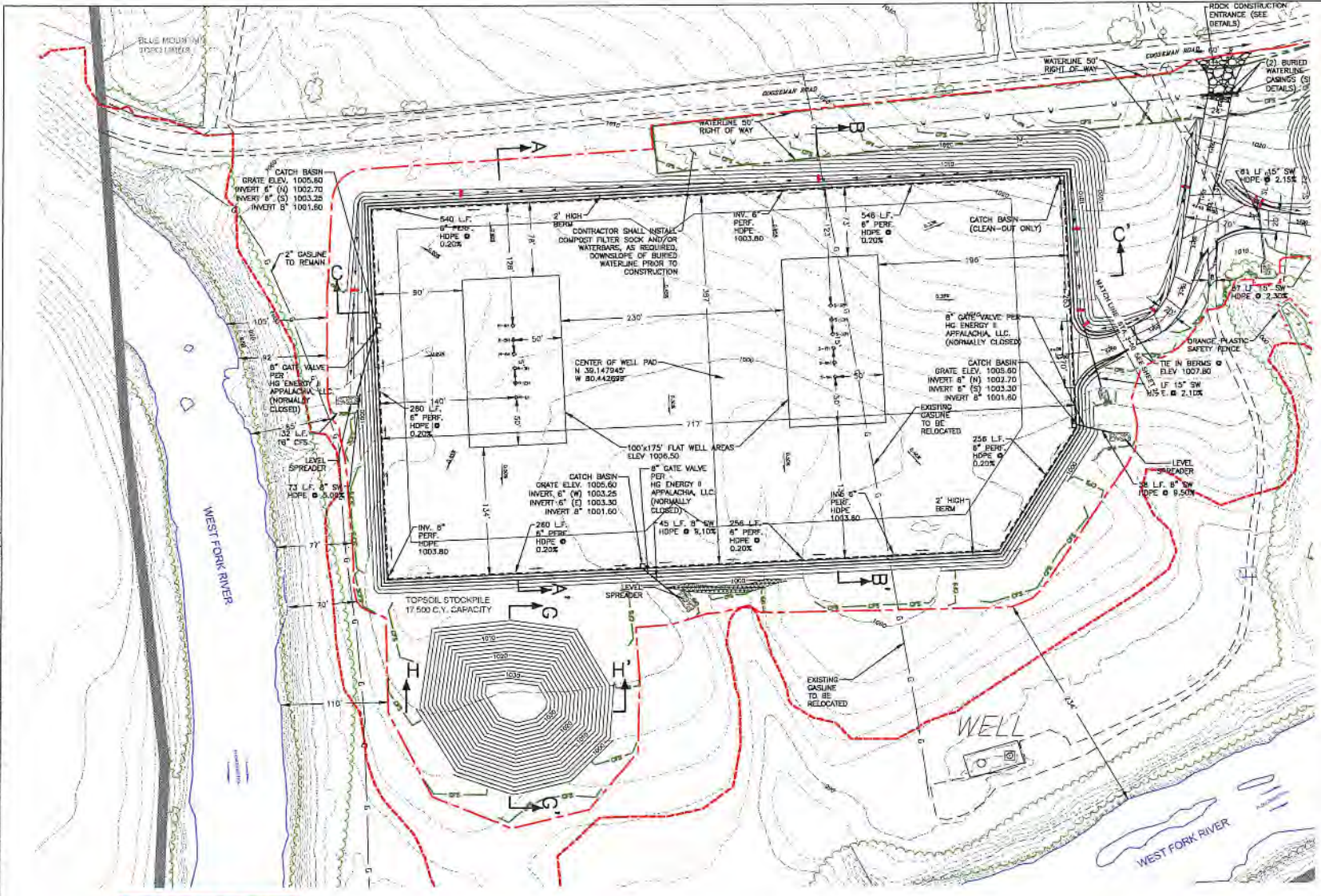
APPROVED: MEP 05/23/2018
CHECKED: MEP 05/23/2018
DRAWN: SHS 02/08/2018
PROJECT No. 4006-PA007715

Penn E&R
Environmental & Remediation, Inc.
DRAWING NUMBER: PAD07715-001
SHEET 1

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

ENVIRONMENTAL & REMEDIATION, INC. 1209 PAD & IMPOUNDMENT, PA007715, TITLE SHEET, DATE: 10/12/2018, 1:58 PM

S:\PROJECT FILES\4000-PA007715-10-1208\DRAWINGS\1209 PAD & IMPROVEMENTS\1209 PAD\1209 UTM BALANCED.DWG, 10/12/2018, 2:13 PM



- LEGEND**
- ROCK CHECK DAM
 - RIPRAP APRON
 - ACCESS ROAD/PAD CHANNEL
 - COMPACT FILTER ROCK 6" UNLESS OTHERWISE NOTED
 - STAKED COMPACT FATCH 500' 6"
 - APPROXIMATE LIMITS OF DISTURBANCE
 - APPROXIMATE 50' WATERLINE RIGHT OF WAY
 - APPROXIMATE PROPERTY LINE
 - EXISTING INDEX CONTOUR
 - EXISTING INTERMEDIATE CONTOUR
 - PROPOSED FINAL GRADE INTERMEDIATE CONTOUR
 - LIMITS OF BLUE MOUNTAIN WASTING
 - EXISTING TREE LINE
 - APPROXIMATE 10' FLOODPLAIN BOUNDARY
 - CHAIN LINK FENCE WITH SECURITY WIRE
 - EXISTING GASLINE
- SECTION**
 A-A (SEE SHEET 3)
 B-B (SEE SHEET 3)
 C-C (SEE SHEET 3)
 D-D (SEE SHEET 3)
 E-E (SEE SHEET 3)
 F-F (SEE SHEET 3)
 G-G (SEE SHEET 3)
 H-H (SEE SHEET 3)

- NOTES**
1. REFER TO THE SHEET WITH THE CONSTRUCTION DETAILS AND DETAILS.
 2. CONTRACTOR SHALL CONVEY WEST VIRGINIA UTILITIES PRESCRIPTION SERVICES (UITS) A GENERAL CONTRACTOR'S OBLIGATION TO MAINTAIN EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR PROTECTING OR REPAIRING ANY UTILITIES DAMAGED BY HIS WORK.
 3. SITE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE BLUE MOUNTAIN WASTING CONSTRUCTION REQUIREMENTS TO PREVENT AND CONTROL EROSION AND SEDIMENTATION AND TO PREVENT AND CONTROL POLLUTION OF SURFACE WATER AND SOILS.
 4. ALL EROSION CONTROL STRUCTURES SHALL BE CONSTRUCTED TO PREVENT AND CONTROL EROSION AND SEDIMENTATION AND TO PREVENT AND CONTROL POLLUTION OF SURFACE WATER AND SOILS.
 5. CONTRACTOR SHALL CONVEY WEST VIRGINIA UTILITIES PRESCRIPTION SERVICES (UITS) A GENERAL CONTRACTOR'S OBLIGATION TO MAINTAIN EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR PROTECTING OR REPAIRING ANY UTILITIES DAMAGED BY HIS WORK.
 6. CONTRACTOR SHALL CONVEY WEST VIRGINIA UTILITIES PRESCRIPTION SERVICES (UITS) A GENERAL CONTRACTOR'S OBLIGATION TO MAINTAIN EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR PROTECTING OR REPAIRING ANY UTILITIES DAMAGED BY HIS WORK.
 7. CONTRACTOR SHALL CONVEY WEST VIRGINIA UTILITIES PRESCRIPTION SERVICES (UITS) A GENERAL CONTRACTOR'S OBLIGATION TO MAINTAIN EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR PROTECTING OR REPAIRING ANY UTILITIES DAMAGED BY HIS WORK.
 8. CONTRACTOR SHALL CONVEY WEST VIRGINIA UTILITIES PRESCRIPTION SERVICES (UITS) A GENERAL CONTRACTOR'S OBLIGATION TO MAINTAIN EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR PROTECTING OR REPAIRING ANY UTILITIES DAMAGED BY HIS WORK.
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APPROVED
WVDEP OOG

10/16/2018

COORDINATES: UTM WITH NAD 83 DATUM, ZONE 17, U.S. FOOT, CENTRAL

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APPROVED: **MEP 05/23/2018**
 CHECKED: **MEP 05/23/2018**
 DRAWN: **JAL 05/23/2018**
 PROJECT No.: **4000-PA007715**

Penn E&R
Environmental & Engineering, Inc.

DRAWING NUMBER: **PA007715-001**
 SHEET: **2/3**

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