



west virginia department of environmental protection

Office of Oil and Gas  
601 57<sup>th</sup> Street, S.E.  
Charleston, WV 25304  
(304) 926-0450  
fax: (304) 926-0452

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Tuesday, April 14, 2020  
WELL WORK PERMIT  
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC  
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for MCDONALD 1211 S-9H  
47-041-05706-00-00

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: MCDONALD 1211 S-9H  
Farm Name: HG ENERGY II APPALACHIA  
U.S. WELL NUMBER: 47-041-05706-00-00  
Horizontal 6A New Drill  
Date Issued: 4/14/2020

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.

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## CONDITIONS

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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](mailto:DEPOOGNotify@wv.gov).

WW-6B  
(04/15)

API NO. 47- 4704105706  
OPERATOR WELL NO. McDonald 1211 S-9H  
Well Pad Name: McDonald 1211

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 494519932 Lewis Freeman West Milford 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: McDonald 1211 S-9H Well Pad Name: McDonald 1211

3) Farm Name/Surface Owner: McDonald Public Road Access: SR 19

4) Elevation, current ground: 1280' Elevation, proposed post-construction: 1264.5'

5) Well Type (a) Gas x Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_  
Other \_\_\_\_\_

(b) If Gas Shallow x Deep \_\_\_\_\_  
Horizontal x

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus at 6753'/6835' and 82' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6800' ✓

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 19,811' ✓

11) Proposed Horizontal Leg Length: 12,528' ✓

12) Approximate Fresh Water Strata Depths: 34', 107', 205', 229', 249' ✓

13) Method to Determine Fresh Water Depths: Nearest offset well data, (47-041-5128, 3938, 4929)

14) Approximate Saltwater Depths: 1299', 1675' ✓

15) Approximate Coal Seam Depths: 810' to 815' ✓

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 X

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

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*B.S. 9-18-19*

18)

**CASING AND TUBING PROGRAM**

<b>TYPE</b>	<b>Size (in)</b>	<b>New or Used</b>	<b>Grade</b>	<b>Weight per ft. (lb/ft)</b>	<b>FOOTAGE: For Drilling (ft)</b>	<b>INTERVALS: Left in Well (ft)</b>	<b>CEMENT: Fill-up (Cu. Ft.)/CTS</b>
Conductor	30"	New	LS	157.5	120'	120' ✓	Drilled In
Fresh Water/Coal	20"	NEW	J-55	94	1000'	1000' ✓	CTS
Intermediate 1	13 3/8"	NEW	J-55 BTC	68	2040'	2040' ✓	CTS
Intermediate 2	9 5/8"	NEW	J-55 BTC	40	2750'	2750' ✓	CTS
Production	5 1/2"	NEW	P-110 HP	23	19811'	19811'	CTS
Tubing							
Liners							

<b>TYPE</b>	<b>Size (in)</b>	<b>Wellbore Diameter (in)</b>	<b>Wall Thickness (in)</b>	<b>Burst Pressure (psi)</b>	<b>Anticipated Max. Internal Pressure (psi)</b>	<b>Cement Type</b>	<b>Cement Yield (cu. ft./k)</b>
Conductor	30"	30"	.500				Drilled In
Fresh Water/Coal	20"	26"	.438	2110	1200	Type 1, Class A	40 % excess yield = 1.20, CTS
Intermediate 1	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	Lead 40% excess, Tail 0% excess
Intermediate 2	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	Lead 40% excess, Tail 0% Excess
Production	5 1/2"	8 1/2"	.415	16240 ✓	12500 ✓	Type 1/Class A	20% excess yield = 1.19, tail yield 1.94
Tubing							
Liners							

**PACKERS**

Kind:				
Sizes:				
Depths Set:				

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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 6800 feet. Drill horizontal leg to estimated 12,528' lateral length, 19,811' TMD. Hydraulically fracture stimulate and be capable of producing from the Marcellus Formation. Should we encounter an unanticipated void in the coal, we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface. We plan to run an ECP above the Gantz/Dominion Storage interval to aid in sealing off and isolating the storage interval.



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

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



21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 22.75 acres

22) Area to be disturbed for well pad only, less access road (acres): 7.31 acres

23) Describe centralizer placement for each casing string:

No centralizers will be used with conductor casing.  
Freshwater/Coal - centralized every 3 joints to surface.  
Intermediate 1 - Bow Spring on every joint, will also be running ACP for isolating storage zone  
Intermediate 2 - 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/Coal - 15.8 ppg PNE-1 + 3% bwoc CaCl<sub>2</sub>, 40% Excess Yield = 1.20, CTS  
Intermediate 1 - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl<sub>2</sub>, 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl<sub>2</sub> zero% Excess, CTS  
Intermediate 2 - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl<sub>2</sub>, 40% Excess, Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl<sub>2</sub> 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 MPA170 20% 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/Coal - Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.  
Intermediate 1 - Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.  
Intermediate 2 - Once casing is at setting depth, Circulate and condition must 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.

**McDonald 1211 Well Pad (N-1H, N-3H, N-5H, S-7H, S-8H, S-9H)**

**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>65997-15-1</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>14808-80-7</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Portland cement	90 - 100	65997-15-1	Calcium oxide	1 - 5	1305-78-8	Magnesium oxide	1 - 5	1309-48-4	Crystalline silica: Quartz (SiO2)	0.1 - 1	14808-80-7			
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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>14808-80-7</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	bentonite	90 - 100	1302-78-9	Crystalline silica: Quartz (SiO2)	5 - 10	14808-80-7									
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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>14808-80-7</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 (SiO2)	5 - 10	14808-80-7	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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1211 S-9H  
Marcellus Shale Horizontal  
Lewis County, WV

1211 S-9H SHL				1211 S-9H LP				14211827.45N 1789527.12E		
1265.5'				1211 S-9H LP				14211741.96N 1790088.08E		
160.538°				1211 S-9H BHL				14199934.62N 1794260.36E		
WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
	30"	30" 157.5# LS	Conductor	0	120 ✓	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
	26"	20" 94# J-55	Fresh Water	0	205	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
			Kittaning Coal	919	924					
			Fresh Water Protection	0	1000 ✓					
	17.5"	13-3/8" 68# J-55 BTC	Big Lime	1480	1545	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 <i>*will also be running ACP for isolating storage zone*</i>	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
			Injun / Gantz (Storage)	1545 / 1830	1650 / 1890					
			Intermediate 1	0	2040 ✓					
	12.25"	9-5/8" 40# J-55 BTC	Fifty / Thirty Foot	1940 / 2037	1965 / 2060	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	2060 / 2130	2130 / 2220					
			5th Sand	2320	2360					
			Bayard Sand	2405	2420					
	8.5" Vertical	5-1/2" 23# P-110 HP CDC HTQ	Speechley	3025	3041	AIR / 9.0ppg SOBM	<b>Lead:</b> 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170 <b>Tail:</b> 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=16240 psi Note:Actual centralizer schedules may be changed due to hole conditions
			Balltown	3250	3290					
			Benson	4340	4350					
	8.5" Curve		Rhinestreet	6107	6377	11.5ppg-12.5ppg SOBM				
Cashaqua			6377	6477						
Middlesex			6477	6509						
West River			6509	6580						
Burkett			6580	6590						
Tully Limestone			6590	6698						
8.5" Lateral	Hamilton		6698	6753	11.5ppg-12.5ppg SOBM					
	Marcellus		6753	6835						
	TMD / TVD (Production)		19811	6800 ✓						
			Onondaga	6835						

LP @ 6800' TVD / 7283' MD

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

+/-12528' ft Lateral

TD @ +/-6800' TVD  
+/-19811' MD

X=centralizers



**List of Frac Additives by Chemical Name and CAS #**

**McDonald 1211 Well Pad (N-1H, N-3H, N-5H, S-7H, S-8H, S-9H)**

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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**PROPOSAL TO DRILL WITHIN DOMINION TRANSMISSION STORAGE FIELD**

FIELD/ZONES: DOMINION FINK/KENNEDY/LOST CREEK -GANTZ SAND

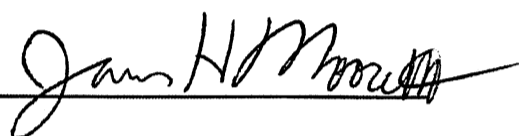
WELL NAME: McDonald 1211 S-9H

Well # 1211 S-9H

DISTRICT/COUNTY/STATE: Freemans Creek/Lewis/WV

Submitted   
JOSH HINTON  
HG ENERGY, LLC

DATE 1-10-20

Approved 

DATE 1-14-20

Dominion Energy Transmission

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Approved 

DATE 1-15-20

Dominion Energy Transmission

**Comments:**

HG Energy has submitted this Casing & Cementing diagram and Drilling Plan to Dominion Transmission for Review. This signed document acknowledges that Dominion has reviewed the proposed casing program and the well's location within the Fink/Kennedy/Lost Creek storage field. This acknowledgement also confirms the proposed casing program is accurate to the proper storage zone as provided by HG Energy, LLC

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

1) Well Operator: HG Energy II Appalachia, LLC 494519932 Lewis Freeman West Milford 7.5'  
Operator ID County District Quadrangle

2) Operator's Well Number: McDonald 1211 S-9H Well Pad Name: McDonald 1211

3) Farm Name/Surface Owner: McDonald Public Road Access: SR 19

4) Elevation, current ground: 1280' Elevation, proposed post-construction: 1264.5'

5) Well Type (a) Gas  Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_  
Other \_\_\_\_\_  
(b) If Gas Shallow  Deep \_\_\_\_\_  
Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus at 6753'/6835' and 82' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6800'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 19,811'

11) Proposed Horizontal Leg Length: 12,528'

12) Approximate Fresh Water Strata Depths: 34', 107', 205', 229', 249'

13) Method to Determine Fresh Water Depths: Nearest offset well data, (47-041-5128, 3938, 4929)

14) Approximate Saltwater Depths: 1299', 1675'

15) Approximate Coal Seam Depths: 810' to 815'

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	120'	120'	Drilled In
Fresh Water/Coal	20"	NEW	J-55	94	1000'	1000'	CTS
Intermediate 1	13 3/8"	NEW	J-55 BTC	68	2040'	2040'	CTS
Intermediate 2	9 5/8"	NEW	J-55 BTC	40	2750'	2750'	CTS
Production	5 1/2"	NEW	P-110 HP	23	19811'	19811'	CTS
Tubing							
Liners							

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				Drilled In
Fresh Water/Coal	20"	26"	.438	2110	1200	Type 1, Class A	40% excess yield = 1.20, CTS
Intermediate 1	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	Load 40% excess, Tail 0% excess
Intermediate 2	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	Load 40% excess, Tail 0% Excess
Production	5 1/2"	8 1/2"	.415	16240	12500	Type 1/Class A	20% excess yield = 1.10, tail yield 1.20
Tubing							
Liners							

**PACKERS**

Kind:				
Sizes:				
Depths Set:				

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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 6800 feet. Drill horizontal leg to estimated 12,528' lateral length, 19,811' TMD. Hydraulically fracture stimulate and be capable of producing from the Marcellus Formation. Should we encounter an unanticipated void in the coal, we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface. We plan to run an ECP above the Gantz/Dominion Storage interval to aid in sealing off and isolating the storage interval.

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 22.75 acres

22) Area to be disturbed for well pad only, less access road (acres): 7.31 acres

23) Describe centralizer placement for each casing string:

No centralizers will be used with conductor casing.  
Production Casing - centralized every 3 joints to surface.  
Intermediate 1 - New string on every 3 joints, will also be running ACP for landing change zone.  
Intermediate 2 - New string on first 3 joints then every third joint to 100' from surface.  
Production - Run 1 split centralizer every 3 joints from the top of the curve to surface. Run 1 split centralizer every 3 joints from the top 8.5' long joint to the top of the curve.

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

Conductor - 4NA, Casing to be drilled in w/ Dual Rotary Rig.  
Fresh Water/Ceal - 15.0 spg PMS-1 + 2% Inco Ceal, 40% Slurry Yield = 1.53, CTR  
Intermediate 1 - Lead: 15.4 spg PMS-1 + 2.5% Inco Ceal, 40% Slurry / Tail: 15.8 spg PMS-1 + 2.5% Inco Ceal, 40% Slurry, CTR  
Intermediate 2 - Lead: 15.4 spg PMS-1 + 2.5% Inco Ceal, 40% Slurry, Tail: 15.8 spg PMS-1 + 2.5% Inco Ceal, 40% Slurry, CTR  
Production - Lead: 14.8 spg PMS-1 + 0.5% Inco Ceal + 1% Inco EC1 + 0.75 gal/ft FPLSL + 0.5% Inco MPA170 20% Slurry, Lead Yield=1.53, Tail Yield=1.54, CTR

25) Proposed borehole conditioning procedures:

Conductor - Gravel the hole to clean at TD.  
Fresh Water/Ceal - Once casing is set setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.  
Intermediate 1 - Once casing is set setting depth, circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.  
Intermediate 2 - Once casing is set setting depth, circulate and condition 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 30 minutes up, or until returns and pump pressure 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.



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1211 S-9H  
Marcellus Shale Horizontal  
Lewis County, WV

1211 S-9H SHL	14211827.45N 1789527.12E
1211 S-9H LP	14211741.96N 1790088.08E
1211 S-9H BHL	14199934.62N 1794260.36E

WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS			
	30'	30" 157.5#	Conductor	0	120	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			
	26'	94# J-55	Fresh Water	0	205	AIR	15.6 ppg PNE-1 + 3% bwoc CaCl	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=210 psi			
			Kilnning Coal	919	924						1000		
			Fresh Water Protection	0	1000								
	17.5'	J-55 BTC	Big Lime	1480	1545	AIR / KCL	2.5% bwoc CaCl 40% Excess / Tail: 16.9 ppg PNE-1 + 2.5% bwoc CaCl	Bow Spring on every joint <i>will also be running ACP for isolating storage zone</i>	Once casing is at setting depth, Circulate and depth, Circulate a condition at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.480" wall thickness Burst=3450 psi			
			Injun / Gantz (Storage)	1545 / 1830	1650 / 1890						2040		
			Intermediate 1	0	2040						2040		
			Filly / Thrity Fool	1840 / 2037	1865 / 2060						1940 / 2037		
			Gordon Srey / Gordon	2060 / 2130	2130 / 2220						2060 / 2130		
			5th Sand	2320	2360						2320		
	12.25'	J-55 BTC	Bayard Sand	2405	2420	AIR / KCL	15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 16.9 ppg PNE-1 + 2.5% bwoc CaCl	Bow Spring on first 2 joints then every third joint to 100' form surface	Once casing is at setting depth, Circulate and depth, Circulate a condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.395" wall thickness Burst=3950 psi			
			Intermediate 2	0	2780						2780		
Speechley			3025	3041	3025								
Baltown			3250	3290	3250								
Benson			4340	4350	4340								
Rhinesstreet			6107	6377	6107								
	8.5" Vertical	P-110 HP CDC HTG	Conductor	0	120	AIR / SOBMA	Lead: 14.5 ppg POZ-PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/gal MPA170 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/gal MPA170 12.5 ppg SOBMA 11.5 ppg SOBMA	Run 1 spiral centralizer every 5 joints from the top of the curve to surface.	Once on bottom/TD with 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=16240 psi Note: actual centralizer schedules may be changed due to hole conditions			
			8.5" Curve	6-1/2" CDC HTG	Rhinesstreet						6377	6377	6377
			Cashaqua		6477						6477	6477	
			Middlessex		6509						6509	6509	
			West River		6580						6580	6580	
			Burkell		6590						6590	6590	
			Tully Limestone		6590						6590	6590	
			Hamilton		6698						6698	6698	
			Marcellus		6753						6753	6753	
	TMD / TVD (Production)	19811	19811		19811								
	8.5" Lateral	6-1/2" CDC HTG	Onondaga	6835	6835	6835							
			Lead: 12.5 ppg SOBMA	11.5 ppg SOBMA	11.5 ppg SOBMA	12.5 ppg SOBMA							
			Lead Yield=1.19	Tail Yield=1.94	CTS	CTS							
			Run 1 spiral centralizer every 3 joints from the top of the curve.	1st 5.5' long joint to the volume prior to pumping cement.	Production casing = 0.415" wall thickness Burst=16240 psi Note: actual centralizer schedules may be changed due to hole conditions								
			Once on bottom/TD with 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=16240 psi Note: actual centralizer schedules may be changed due to hole conditions									
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Run 1 spiral centralizer every 5 joints from the top of the curve to surface.			Once on bottom/TD with 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.										

LP @ 6800' TVD / 7283' MD  
8.5" Hole - Cemented Long String  
6-1/2" 23# P-110 HP CDC HTG  
+/-12528' # Lateral  
TD @ +/-6800' TVD  
+/-19811' MD  
X=Centralizers

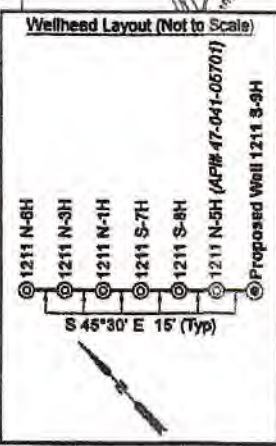
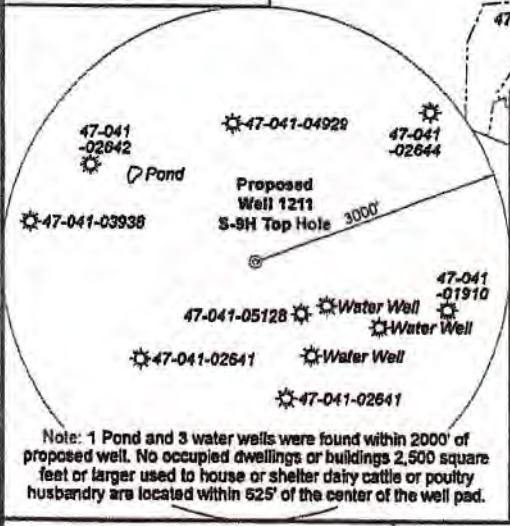
**HG Energy II  
Appalachia, LLC  
Well No. 1211 S-9H**

Page 1 of 4

Tag	Bearing	Dist.
L1	S 76°05' W	2,942.0'
L2	N 76°02' W	2,323.4'
L3	N 29°20' W	2,050.2'
L4	N 47°34' E	1,192.0'
L5	S 81°20' E	567.4'

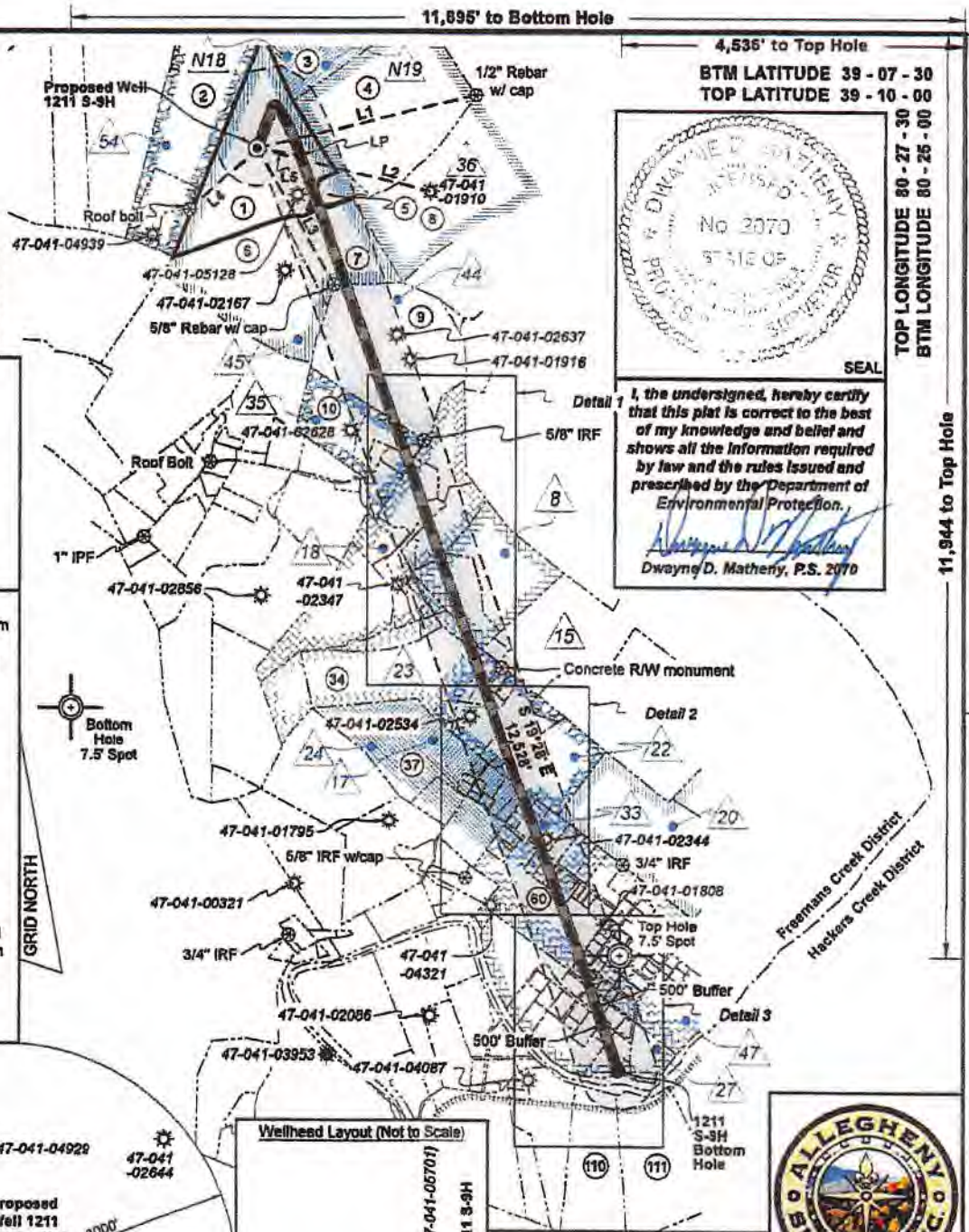
**Notes:**  
Well No. 1211 S-9H  
UTM NAD 1983 (USSF)  
Top Hole Coordinates  
N: 14,211,827.45'  
E: 1,789,527.12'  
Landing Point Coordinates  
N: 14,211,741.88'  
E: 1,790,088.08'  
Bottom Hole Coordinates  
N: 14,199,934.62'  
E: 1,794,260.35'

**Notes:** Well No. 1211 S-9H  
West Virginia Coordinate System  
of 1927, North Zone  
based upon Differential GPS  
Measurements.  
Top Hole coordinates  
Latitude: 39°08'01.81"  
Longitude: 80°28'27.59"  
Bottom Hole coordinates  
Latitude: 39°06'04.04"  
Longitude: 80°27'28.40"  
UTM Zone 17, NAD 1983  
Top Hole Coordinates  
N: 4,331,773.670m  
E: 545,448.957m  
Bottom Hole Coordinates  
N: 4,328,148.727m  
E: 546,891.850m  
Plat orientation and corner and  
well references are based upon  
the grid north meridian.  
Well location references are  
based upon the magnetic  
meridian.



**Legend**

- Proposed gas well
- Well Reference, as noted
- Monument, as noted
- Existing Well, as noted
- Existing Plugged Well, as noted
- Digitized Well, as noted
- Surface boundary (approx.)
- Interior surface tracts (approx.)
- Creek or Drain
- Existing Road
- Railroad Tracks



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 rules issued and prescribed by the Department of Environmental Protection.

*Dwayne D. Matherly*  
Dwayne D. Matherly, P.S. 2070



TOP LONGITUDE 80 - 27 - 30  
BTM LONGITUDE 80 - 25 - 00

11,944 to Top Hole  
8,893 to Bottom Hole

FILE NO: 79-36-12-U-F-18  
DRAWING NO: 1211 S-9H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY:  
Submeter  
PROVEN SOURCE OF ELEVATION:  
CORS, Bridgeport, WV

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

DATE: December 13 20 19  
OPERATOR'S WELL NO. 1211 S-9H  
API WELL NO  
47 - 041 - 05706  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

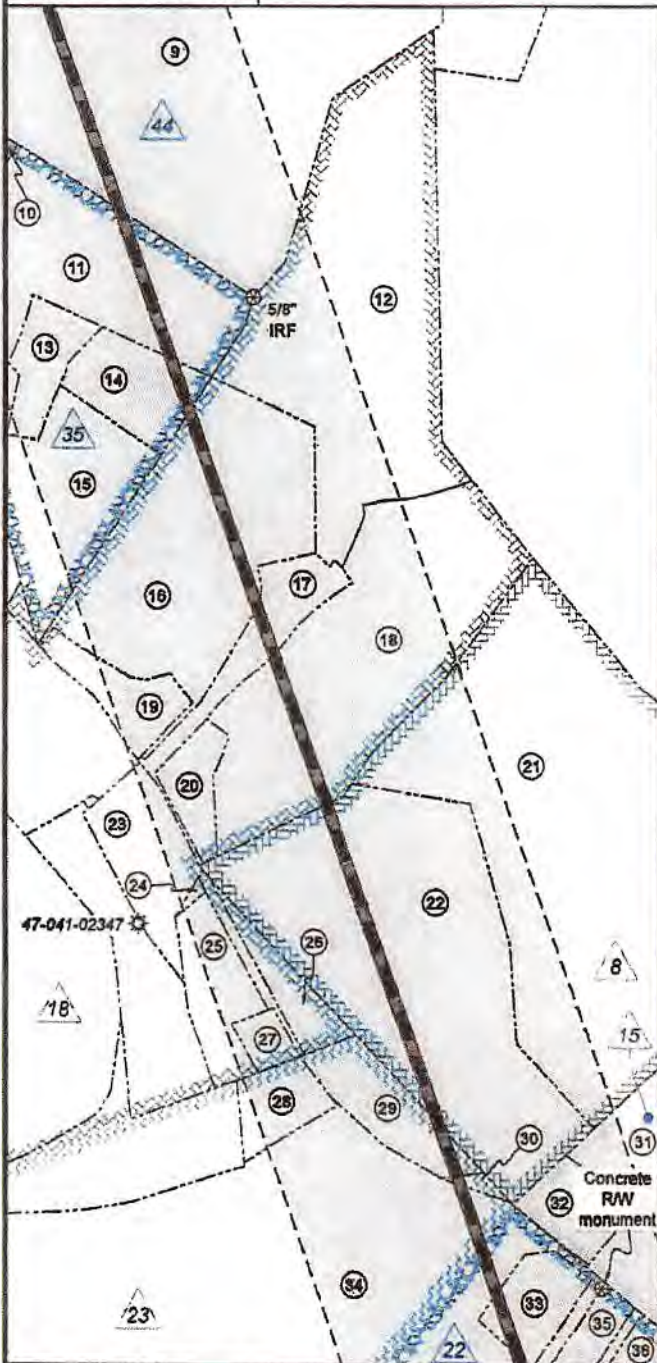
LOCATION: ELEVATION: 1,265.5' WATERSHED: Middle West Fork Creek  
DISTRICT: Freemans Creek TH - West Milford  
SURFACE OWNER: HG Energy II Appalachia, LLC QUADRANGLE: BH - Weston  
ROYALTY OWNER: Mary E. Post, et al, et al COUNTY: Lewis  
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ACREAGE: 61.50  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,611' MD 6,800' TVD

WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White  
ADDRESS: 5280 Dupont Road ADDRESS: 5280 Dupont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101

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WV Department of  
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Detail 1 - Scale: 1" = 500'

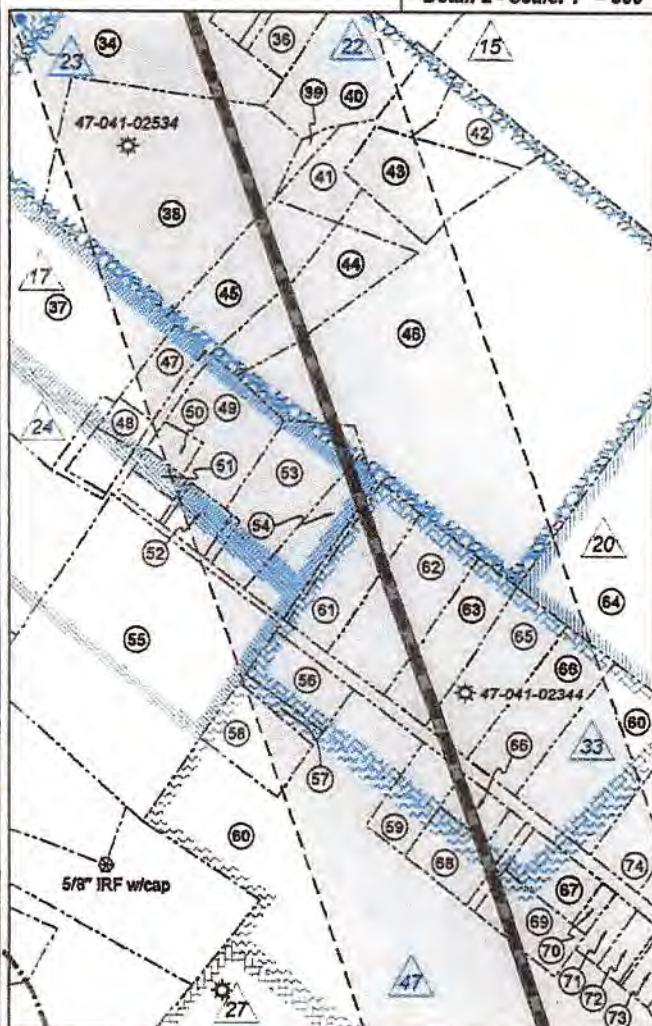


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Detail 2 - Scale: 1" = 500'



FILE NO: 79-36-12-U-F-18  
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MINIMUM DEGREE OF ACCURACY:  
Submeter  
PROVEN SOURCE OF ELEVATION:  
CORS, Bridgeport, WV

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

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47 - 041 - 05706  
STATE COUNTY PERMIT

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(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1,265.5' WATERSHED: Middle West Fork Creek  
DISTRICT: Freemans Creek

TH - West Milford  
QUADRANGLE: BH - Weston  
COUNTY: Lewis  
ACREAGE: 61.50

SURFACE OWNER: HG Energy II Appalachia, LLC  
ROYALTY OWNER: Mary E. Post, et al, et al

LEASE NO: \_\_\_\_\_ ACREAGE: 145.00

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,800' TVD  
19,811' MD

WELL OPERATOR: HG Energy II Appalachia, LLC  
ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101

DESIGNATED AGENT: Diane C. White  
ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101



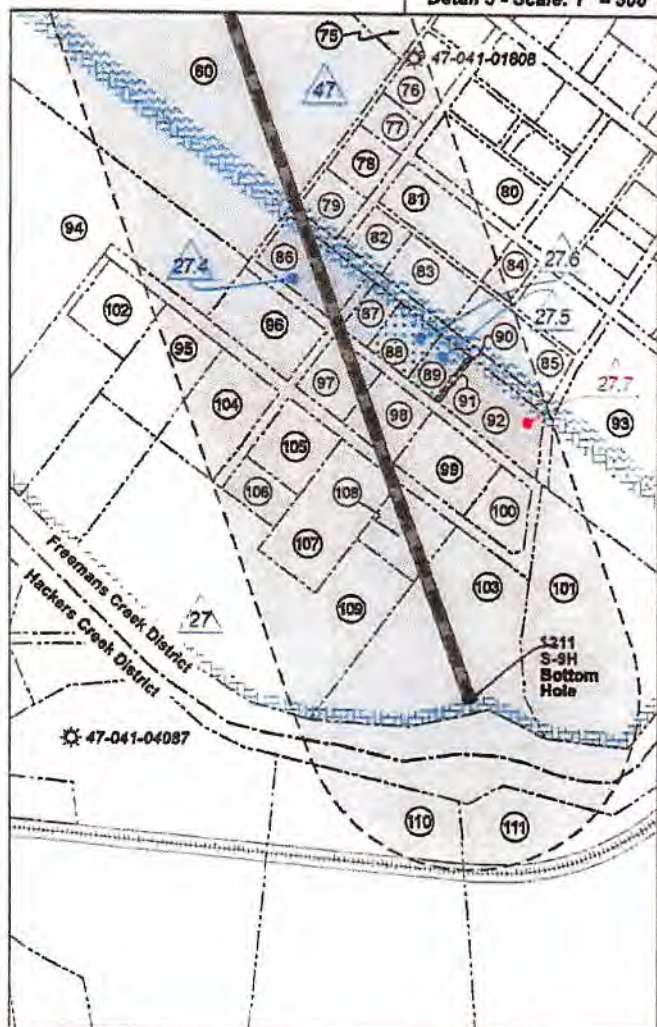


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Detail 3 - Scale: 1" = 500'



ID	Lease
8	T.S. Allman, et al
15	C.W. Smith, et al
17	Maggie Cottrill
18	Cordelia Bailey
20	E.C. Strother, et al
22	C. Burke Morris, et al
23	C. Burke Morris, et al
24	A.B. College Inc
27	E.R. Bennett, et al
27.4	Betty M Paugh
27.5	Willeim C. & Mabie Smarr
27.6	Freddie L. & Betty G. Fox
27.7	UNLEASED
33	H.A. Fletcher, et al
35	Jesse Leeson, et al
36	George W. Nelly, et al
44	T.P. Barb, et al
45	Mary E. Post, et al
47	Minter E. Bailey
54	HG Energy II Appalachia, LLC
N18	Arthur Beaghley & et al
N19	James Beaghley, et al

FILE NO: 79-36-12-U-F-18  
DRAWING NO: 1211 S-9H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY:  
Submeter  
PROVEN SOURCE OF ELEVATION:  
CORS, Bridgeport, WV

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

DATE: December 13 20 19  
OPERATOR'S WELL NO. 1211 S-9H  
API WELL NO  
47 - 041 - 05706  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1,285.5' WATERSHED: Middle West Fork Creek  
DISTRICT: Freemans Creek

TH - West Milford  
QUADRANGLE: BH - Weston  
COUNTY: Lewis  
ACREAGE: 61.50

SURFACE OWNER: HG Energy II Appalachia, LLC  
ROYALTY OWNER: Mary E. Post, et al, et al LEASE NO: ACREAGE: 145.00

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,800' TVD 19,611' MD

WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White  
ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101



No.	TM / Par	Owner	Bk / Pg	Ac.
1	7B / 10	HG Energy II Appalachia, LLC	730 / 677	61.50
2	7B / 9	Brincefield Family Trust	588 / 740	56.76
3	7B / 23	Atlantic Coast Pipeline, LLC	700 / 779	187.89
4	7B / 22	CNX Gas Company, LLC	680 / 266	73.676
5	7B / 10.1	Charles H. & Vanessa D. Brosius	616 / 527	5.00
6	7B / 11	CNX Gas Company, LLC	580 / 266	54.50
7	7B / 13	Melvin B. & Terri D. Woods	672 / 241	25.50
8	7B / 21	John J. Oldaker, Jr.	658 / 56	64.86
9	7B / 14	Kelvin G. & Diana M. Willston	448 / 11	65.00
10	7C / 32	Kelvin G. & Trent M. Willston	673 / 669	16.08
11	7C / 32.4	Lucas O. Himefrick	686 / 409	6.51
12	7C / 34.1	Timothy L. & Leann Kerns	714 / 779	13.36
13	7C / 32.1	Laura Taylor	665 / 582	1.31
14	7C / 32.2	Richard E. Stuffer II	543 / 969	2.07
15	7C / 32.3	Martin T. & Betty A. Queen	544 / 566	4.36
16	7C / 30.1	Russell E. & Catherine F. Kerns	714 / 787	9.46
17	7C / 34	Russell W. & Martha J. Kerns	524 / 462	1.80
18	7C / 34.2	Richard A. & Carolyn M. Hamric	714 / 783	10.89
19	7C / 30.2	Connie Riffe	319 / 386	1.40
20	7C / 30.3	Barbara J. & Herman Watson Jr.	511 / 628	1.08
21	7C / 35	Mary Jane Bailey	W25 / 263	25.09
22	7C / 36	Mary Jane Bailey	W25 / 263	14.00
23	7C / 30.6	Richard A. & Carolyn M. Hamric	386 / 361	2.34
24	7C / 30.9	Richard A. & Carolyn M. Hamric	446 / 209	0.06
25	7C / 30.4	Billy & Penelope A. McCormick	341 / 62	1.89
26	7C / 37	Timothy J. Hicks	680 / 257	1.25
27	7C / 38	Timothy J. Hicks	680 / 257	0.50
28	7C / 27	Stephen R. & Joyce A. Lamb	664 / 152	1.25
29	7C / 39	Miguel A. & Betsy L. Rodriguez	622 / 418	1.96
30	7C / 40	Mary Jane Bailey	W25 / 263	0.12
31	7C / 57.4	Lynwood L. & Donna S. Wolfe	712 / 455	37.89
32	7C / 41	McCanns Run Church	110 / 398	1.13
33	7C / 28.4	Charles D. & Melinda S. Bailey	614 / 321	0.70
34	7C / 26.1	Charles D. & Melinda S. Bailey	653 / 713	42.15
35	7C / 43	Charles D. & Melinda S. Bailey	653 / 713	0.84
36	7C / 44	Beth Ann Dunham	211 / 349	1.16
37	7C / 25	Fred Allan Bailey	452 / 268	32.27
38	7C / 46	Charles D. & Melinda S. Bailey	653 / 713	7.30
39	7C / 47	Michael D. & Patricia L. Goodwin	461 / 551	0.25
40	7C / 45	Stephen D. & Kathleen G. Lemon	571 / 293	2.50
41	7C / 58	Michael D. & Patricia L. Goodwin	461 / 551	1.98
42	7C / 54.1	Michael D. & Patricia L. Goodwin	536 / 524	1.58
43	7C / 56.1	Michael D. Goodwin, Jr.	539 / 515	2.00
44	7C / 55	Michael D. & Patricia L. Goodwin	461 / 551	1.75
45	7C / 48	Michael D. & Patricia L. Goodwin	461 / 551	2.00
46	7C / 54	Joshua V. & Marsha T. Garton	665 / 309	20.29
47	7C / 49	Randal Lynn McVay	670 / 604	0.60
48	7C / 50.1	Blaine & Lola Jerden	385 / 327	0.30
49	3 / 1	Timothy & Cheryl Kelley	447 / 138	1.81
50	3 / 1.1	Timothy C. Kelley	697 / 589	0.26
51	3 / 3.1	Robert D. & Dinah S. Bailey	709 / 639	0.26
52	3 / 4	Bobbie Jo & Carie O. Lockhart	850 / 407	0.52
53	3 / 6	Sandra K. & Richard G. Smith II	591 / 485	2.32
54	3 / 2	Sandra K. & Richard G. Smith II	670 / 315	1.32
55	7C / 51	Charlene Sweeney	W18 / 825	9.75
56	3 / 9.1	Barbara L. & John T. Boore	579 / 504	0.99

No.	TM / Par	Owner	Bk / Pg	Ac.
57	3 / 9.4	Waitman Rutherford	580 / 493	0.26
58	3 / 9.2	Waitman Rutherford	353 / 195	1.02
59	7C / 53.2	Timothy W. & Twila Perkins	714 / 287	1.00
60	7C / 53.4	Jeremy & Jenny L. Garton	592 / 605	37.21
61	3 / 8	Sondra A. Granlund	512 / 158	1.64
62	3 / 8.1	Kenneth W. & Savannah D. Catlin	478 / 148	2.36
63	7C / 53.1	Kenneth W. & Savannah D. Catlin	347 / 693	1.70
64	7C / 86.1	Joshua V. & Marsha T. Garton	550 / 523	57.25
65	7C / 53.7	Kenneth W. & Savannah D. Catlin	531 / 764	2.00
66	3 / 11	Brittany Nicole Strother	W3 / 320	0.50
67	3 / 13	Robert L. & Nancy C. Montgomery	585 / 289	0.86
68	3 / 11.1	Sherry Strother & Craig Sturm	654 / 463	1.09
69	3 / 12	Robert L. & Nancy C. Montgomery	369 / 99	1.03
70	3 / 14	Robert L. & Nancy C. Montgomery	585 / 289	0.17
71	3 / 15.1	Barbara A. White	W39 / 37	0.37
72	3 / 15	Barbara A. White	W39 / 37	0.63
73	7C / 53.3	James R. & Joycelyn A. Riffe	544 / 318	4.46
74	7C / 53.11	Jeremy & Jenny Garton	691 / 768	2.00
75	7C / 53	Julianne Garton	587 / 342	1.58
76	1 / 4	Frank & Lillie Swisher	550 / 617	0.77
77	1 / 5	Carol Lee Swisher	367 / 565	0.29
78	1 / 6	Betty M. Paugh	304 / 404	0.56
79	1 / 7	Betty M. Paugh	304 / 404	0.54
80	1 / 15	Dawn Snyder Posey	720 / 879	1.26
81	1 / 13	Dawn Snyder Posey	556 / 416	1.31
82	1 / 12	Betty M. Paugh	304 / 404	0.47
83	1 / 11	Benjamin M. Smith	697 / 245	0.85
84	1 / 14	Dawn Snyder Posey	720 / 879	0.34
85	1 / 10	Roberta R. Lamb	642 / 262	3.57
86	1 / 8	Betty M. Paugh	304 / 404	1.08
87	1 / 9	Betty M. Paugh	304 / 404	0.55
88	1 / 9.2	Betty G. & Freddie L. Fox, Sr.	702 / 171	0.57
89	1 / 9.1	William C. & Mable A. Smarr	--- / ---	0.38
90	1 / 9.3	William C. & Mable A. Smarr	--- / ---	0.03
91	1 / 90.1	David G. & Eileen F. Sellers	548 / 325	0.03
92	1 / 50	David G. & Eileen F. Sellers	530 / 436	1.19
93	1 / 74	Joshua V. & Marsha T. Garton	262 / 821	16.92
94	7C / 52.7	Jeremy R. & Jennifer L. Garton	549 / 377	14.03
95	7C / 52.13	Joseph A. & Malissa McWhorter Miller	584 / 422	1.58
96	7C / 62.8	Joseph & Beverly Butcher	550 / 324	1.29
97	7D / 57	Erin B. & William M. Hunt, II	--- / ---	0.74
98	7D / 55	Erin B. & William M. Hunt, II	--- / ---	0.81
99	7D / 52	Erin B. & William M. Hunt, II	--- / ---	1.09
100	7D / 48	Mary E. Rittenhouse	--- / ---	0.69
101	7D / 46	Ericka & Ricky D. Bailey, II, et al	--- / ---	6.12
102	7C / 52.6	Jeremy R. & Jennifer L. Garton	588 / 136	1.00
103	7D / 45	Shirley A. Grewe	--- / ---	5.19
104	7D / 56	Christopher R. & Ginger R. Franklin	--- / ---	1.55
105	7D / 53	Eric T. & Stephanie M. Smith	687 / 79	0.93
106	7D / 49	Eric T. & Stephanie M. Smith	687 / 79	0.53
107	7D / 50	William P. & Amy W. Goldsmith	665 / 391	1.97
108	7D / 47	Steven B. & Valerie E. Corley	668 / 328	1.00
109	7D / 51	William P. & Amy W. Goldsmith	665 / 391	8.89
110	7D / 11	Ricky W. Frame	677 / 723	31.50
111	7D / 22	James Alonzo & Carol Tretz Smith	342 / 89	37.85

FEB 03 2020

FILE NO: 79-36-12-U-F-18  
DRAWING NO: 1211 S-9H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY:  
Submeter  
PROVEN SOURCE OF ELEVATION:  
CORS, Bridgeport, WV



DATE: December 13 2019  
OPERATOR'S WELL NO. 1211 S-9H  
API WELL NO  
47 - 041 - 0570L  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
LOCATION: ELEVATION: 1,265.5' WATERSHED: Middle West Fork Creek TH - West Milford  
DISTRICT: Freemans Creek QUADRANGLE: BH - Weston  
SURFACE OWNER: HG Energy II Appalachia, LLC COUNTY: Lewis  
ROYALTY OWNER: Mary E. Post, et al, et al ACREAGE: 61.50  
LEASE NO: \_\_\_\_\_ ACREAGE: 145.00  
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,800' TVD  
19,811' MD

WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White  
ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101

WW-9  
(4/16)

API Number 47 - \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. McDonald 1211 S-9H

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) Middle West Fork Creek 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 \_\_\_\_\_)

Will closed loop system be used? If so, describe: Yes, cuttings and fluids will be collected in a closed loop 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. Vertical - Air, Air/KCL, Air/SOBM, Horizontal - SOB

-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

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.

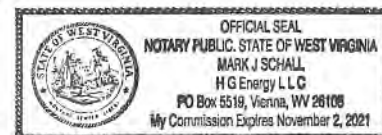
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations 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

Subscribed and sworn before me this 23rd day of September, 2019  
[Signature] Notary Public

My commission expires 11/2/2021



Office of Oil and Gas

**HG Energy II Appalachia, LLC**

Proposed Revegetation Treatment: Acres Disturbed 22.75 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

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Seed Mixtures

**Temporary**

**Permanent**

Seed Type	lbs/acre
Tall Fescue	40
Ladino Clover	5

Seed Type	lbs/acre
Tall Fescue	40
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: Barry S. [Signature]

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

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

Title: Oil & Gas Inspector

Date: 9-23-19

Field Reviewed?  Yes

No

# 1211 Pad Wellhead Layout

9/13/2019

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12111-N-1H

12111-N-3H

12111-N-5H

1211 PAD

N-3H  
N-1H  
S-7H  
S-8H  
N-5H  
S-9H

Access Road

Detail

0 250

1" = 250'

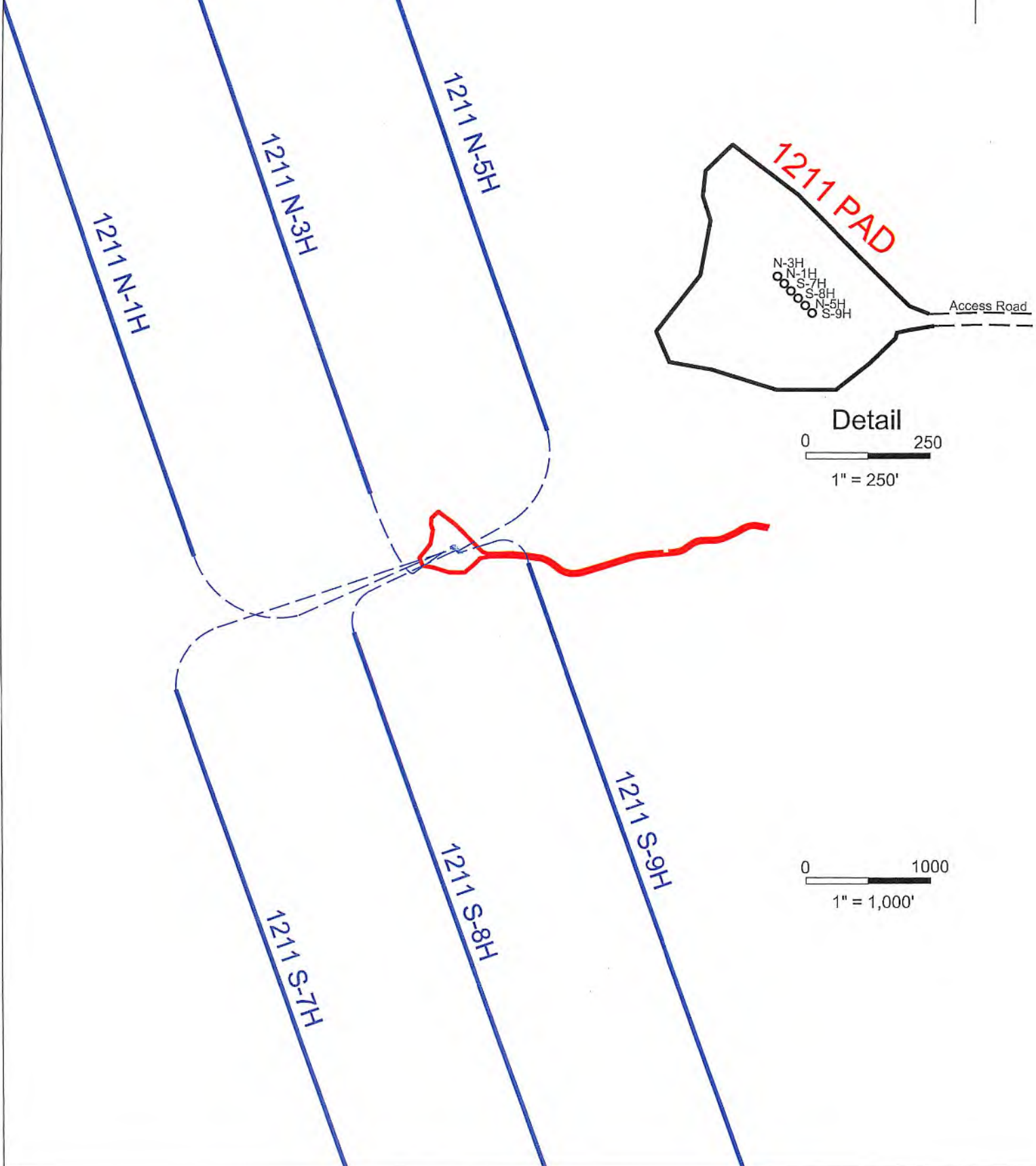
12111-S-7H

12111-S-8H

12111-S-9H

0 1000

1" = 1,000'

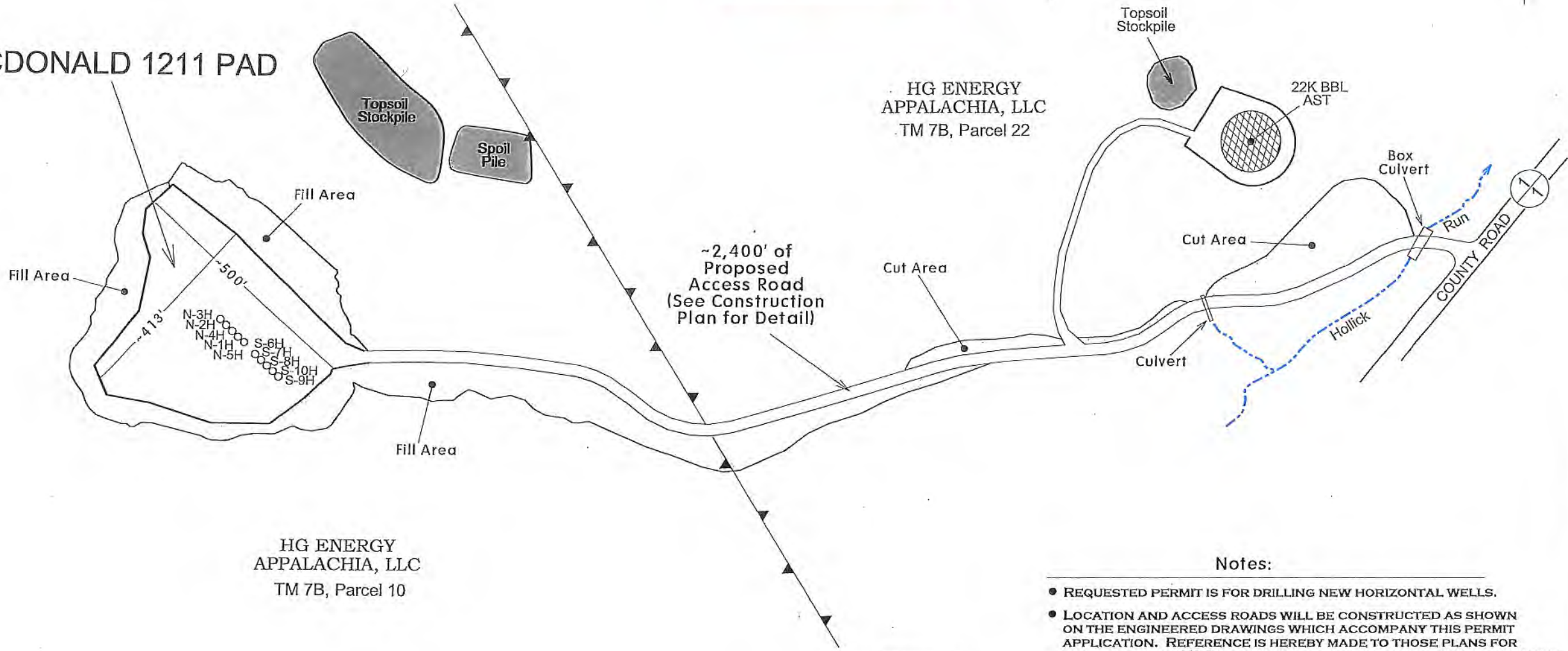


Reclamation Plan For:  
MCDONALD 1211 PAD

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



MCDONALD 1211 PAD



HG ENERGY  
APPALACHIA, LLC  
TM 7B, Parcel 10

HG ENERGY  
APPALACHIA, LLC  
TM 7B, Parcel 22

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Notes:

- REQUESTED PERMIT IS FOR DRILLING NEW HORIZONTAL WELLS.
- 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.

# Cuttings Disposal/Site Water

## Cuttings -Haul off Company:

Gap Industries, Inc. DOT # 0876278  
1875 Smith Two State Rd. Atlasburg, PA 15004  
1-888-254-5227

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

Environmental Coordination Services & Recycling (ECS&R)  
8287 US Highway 19  
Cochranon, PA 16814  
814-425-7778

## Disposal Locations:

Apex Environmental, LLC Permit # 06-08488  
11 County Road 78  
Amsterdam, OH 43908  
740-548-4889

Westmoreland Waste, LLC Permit # 100277  
111 Conner Lane  
Belle Vernon, PA 15012  
724-829-7894

Sycamore Landfill Inc. Permit #R80-079001 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 15018  
724-756-1571

Waste Management Kelly Run Permit # 100663  
1801 Park Side Drive  
Elizabeth, PA 15027  
412-884-7569

Waste Management South Hills (Arnold) Permit # 100592  
3100 Hill Road  
Liberty, PA 15129  
724-348-7013  
412-884-7569

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

Waste Management Meadowfill Permit # 1082  
1488 Dawson Drive  
Bridgeport, WV 26330

Brooke County Landfill Permit # SWR-108-87 / WV 0109029  
Rd 2 Box 410  
Colliers, WV 26025  
304-748-0014

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Wetzel County Landfill Permit # SWF-1021-97 / WV 0109185  
Rt 1, Box 156A  
New Martinsville, WV 26035  
804-465-3800

Energy Solutions, LLC Permit # UT 2300249  
423 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 MIP020906814  
8947 US 131 North, PO Box 1080  
Kalkaska, MI 49646  
231-258-9961

**Water Haul off Companies:**

Dynamic Structures, Clear Creek DOT # 720485  
3790 State Route 7  
New Waterford, OH 44445  
330-892-0184

Nahors 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 789  
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  
Lowellville, OH 44436  
830-536-6825

Adams #1 (Buckeye Brine, LLC)  
Permit # 34-031-2-7177  
28988 Airport Road  
Coshooton, OH 43812  
740-575-4484  
512-478-6545

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

Foras, Inc.  
1380 Rta. 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 15622

Burna Drilling & Excavating  
618 Crabapple Road P.O. Box  
Wind Ridge, PA 15880

Nichols 1-A (SWIW #13)  
Permit # 8862  
300 Charrington Pkwy, Suite 200  
Coraopolis, PA 15108  
412-829-7275

Grosella (SWIW #34)  
Permit # 4096  
Rt. 88  
Garrettsville, OH  
718-276-4816

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  
2680 Exposition, Suite 117  
Austin, TX 78703  
512-478-6545

Mozena #1 Well (SWIW # 13)  
Permit # 34-157-2-5511-00-00  
8367 E. State Street  
Newcomerstown, OH 43882  
740-763-3866

Goff SWD #1 (SWIW # 27)  
Permit # 34-119-2-8776-000  
300 Cherrington Pkwy, Suite 200  
Corapolis, PA 15108  
412-829-7275

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 # 34-121-2-2489-00-00  
Select Energy Services, LLC  
7884 S. Pleasants Hwy  
St. Marys, WV 26170  
304-665-2652

OH UIC #1 Bu keya 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  
304-823-6568

US Steels 11385  
Permit # 47-001-00561  
200 Evergreen Drive  
Waynesburg, PA 15730  
304-823-6568

Chapin #7 UIC (SWIW #7)  
Permit # 34-083-2-4187-00-00  
Elkhead Gas & Oil Company  
12188 Marne Rd. NE  
Newark, OH 43055  
740-763-8966

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# HG Energy II Appalachia, LLC

## Site Safety Plan

McDonald 1211 Well Pad  
636 Hollick Run Rd Jane Lew  
Lewis County, WV 26378

August 2019: Version 1

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

HG Energy II Appalachia, LLC

5260 Dupont Road

Parkersburg, WV 26101

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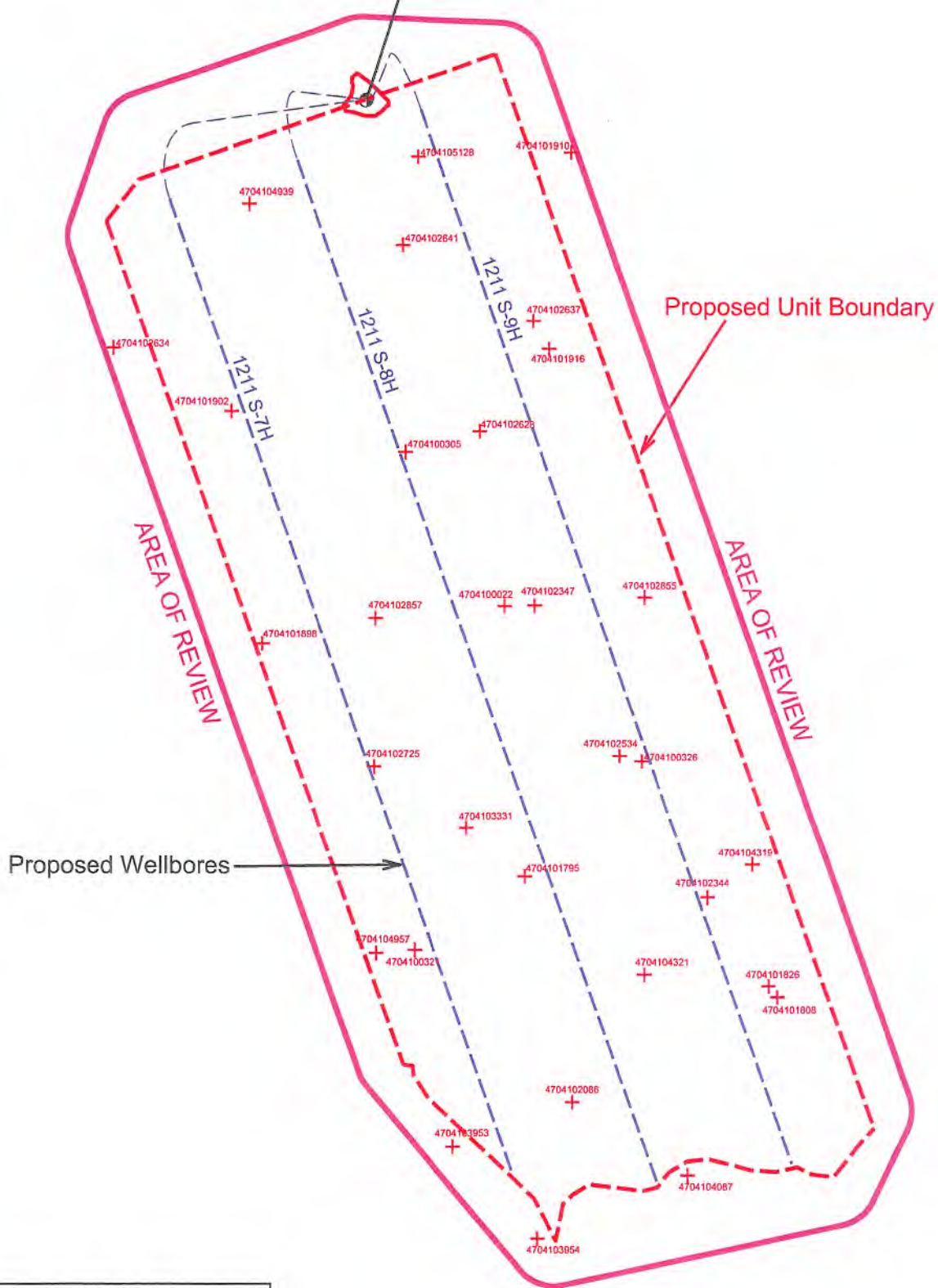
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*Darryl St. Denis 8-12-19*



McDONALD 1211 PAD



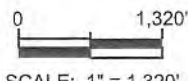
Well Key	
	Conventional Vertical Well
	Proposed Horizontal Marcellus Well

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

Area of Review for:  
McDONALD 1211 PAD  
 Proposed 1211 S-7H Proposed 1211 S-8H  
 Proposed 1211 S-9H

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

Freeman's Creek District & Hacker's Creek District  
 Lewis County, W.Va.



SCALE: 1" = 1,320'



EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:

**McDONALD 1211 SOUTH UNIT AND PROPOSED WELLS S-7H, S-8H & S-9H**

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4704100022	Lewis	Lovett, N.	Dominion Energy Transmission, Inc.	Balltown	Gas	3062	ACTIVE	39.118421	-80.468945
2	4704100305	Lewis	E C Fletcher	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	3134	ACTIVE	39.123199	-80.472846
3	4704100321	Lewis	W A Chittum	Dominion Energy Transmission, Inc.	UNKNOWN	Observation		ACTIVE	39.107875	-80.472600
4	4704100326	Lewis	W F Garton	Hope Natural Gas Company	Hampshire Grp	Gas	2090	UNKNOWN	39.113636	-80.463546
5	4704101795	Lewis	Bertha H Nay	Dominion Energy Transmission, Inc.	Benson	Gas	4240	ACTIVE	39.110099	-80.468219
6	4704101808	Lewis	Frank/Lillie Swisher	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	2131	ACTIVE	39.106351	-80.458236
7	4704101826	Lewis	Minter E Bailey	Dominion Energy Transmission, Inc.	Benson	Gas	4165	UNKNOWN	39.106691	-80.458584
8	4704101898	Lewis	Kenneth Burrough	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4521	ACTIVE	39.117322	-80.478562
9	4704101902	Lewis	Marie Clevenger/R Clevenger	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4270	ACTIVE	39.124485	-80.479733
10	4704101910	Lewis	Leon S/E Lucille Rastle	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	3310	ACTIVE	39.132381	-80.466204
11	4704101916	Lewis	Kelvin G Williston	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4320	ACTIVE	39.126334	-80.467110
12	4704102086	Lewis	Olga M Smith 2	Alliance Petroleum Co. LLC	Benson	Gas	4241	ACTIVE	39.103155	-80.466389
13	4704102344	Lewis	H Fletcher	Charity Gas, Inc.	UNKNOWN	Gas	-	ABANDONED	39.109423	-80.460972
14	4704102347	Lewis	C Bailey	Dominion Energy Transmission, Inc.	UNKNOWN	Gas	-	ACTIVE	39.118435	-80.467751
15	4704102534	Lewis	C B Morris	Dominion Energy Transmission, Inc.	Benson	Gas	4225	ACTIVE	39.113809	-80.464422
16	4704102628	Lewis	Jesse Lesson	Dominion Energy Transmission, Inc.	UNKNOWN	STORAGE	-	ACTIVE	39.123812	-80.469890
17	4704102634	Lewis	T S Allman	Dominion Energy Transmission, Inc.	UNKNOWN	STORAGE	-	ACTIVE	39.126443	-80.484399
18	4704102637	Lewis	Mckinley & Barb	Dominion Energy Transmission, Inc.	UNKNOWN	STORAGE	-	ACTIVE	39.127211	-80.467745
19	4704102641	Lewis	Mary E Post	Dominion Energy Transmission, Inc.	UNKNOWN	STORAGE	-	ACTIVE	39.129572	-80.472914
20	4704102725	Lewis	John Gerath	Dominion Energy Transmission, Inc.	Balltown	Gas	3333	ACTIVE	39.113526	-80.474162
21	4704102855	Lewis	Allman Heirs	Dominion Energy Transmission, Inc.	UNKNOWN	Observation	-	ACTIVE	39.118657	-80.463391
22	4704102857	Lewis	C W Smith	Dominion Energy Transmission, Inc.	Fifth	Gas	2238	ABANDONED	39.118077	-80.474068
23	4704103331	Lewis	C F Bailey	Dominion Energy Transmission, Inc.	Gantz	Storage	2154	PLUGGED	39.111615	-80.470527
24	4704103953	Lewis	WVU - 4H Camp	Enervest Operating, LLC	Benson	Gas	4183	PLUGGED	39.101820	-80.471144
25	4704103954	Lewis	WVU - 4H Camp	Enervest Operating, LLC	Benson	Gas	4200	PLUGGED	39.098989	-80.467825
26	4704104087	Lewis	James Alonzo/C T Smith	Enervest Operating, LLC	Greenland Gap Fm	Gas	4169	ACTIVE	39.100885	-80.461831
27	4704104319	Lewis	M A Jerden/J V Garton 1	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4365	ACTIVE	39.110428	-80.459202
28	4704104321	Lewis	Jeremy/Jenny Garton 1	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4310	ACTIVE	39.107064	-80.463507
29	4704104939	Lewis	Robert/Terry Brincefield	Dominion Energy Transmission, Inc.	Misc Sands-BNSN/BRLR	Gas	4658	ACTIVE	39.130854	-80.478987
30	4704104957	Lewis	Hayward Allman	Dominion Energy Transmission, Inc.	Hampshire Grp	Gas	4355	ACTIVE	39.107786	-80.474138
31	4704105128	Lewis	Michael McDonald	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4320	ACTIVE	39.132274	-80.472291
32										
							YELLOW DENOTES WELL WITH TVD > 4,500'		GREEN DENOTES SURVEYED WELLS	

SOURCE: WVGES DATASET (2017) and WVDEP WEBSITE AND FIELD SURVEYS



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

January 17, 2020

Hope Natural Gas Company  
Bank One Center, W Third Street  
Clarksburg, WV 26301

RE: Area of Review – McDonald 1211 Well Pad (N-1H to N-5H, S-7H – S9H)  
Hydraulic Fracturing Notice

Dear Sir:

HG Energy II Appalachia, LLC, is developing a Marcellus pad (McDonald 1211 pad) located in Lewis County, WV. As an owner or operator of a conventional natural gas well in this area, we are requesting your assistance in this matter.

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HG Energy anticipates conducting hydraulic fracturing of the McDonald 1211 Pad during the fourth quarter of 2020. We have identified conventional natural gas wells operated by your company within 500' of one of the newly planned laterals. A plat for the well is attached.

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3. Inspect or install master valves rated at 3,000 psi or other necessary equipment for wellhead integrity.
4. Notify the OOG and HG Energy if any changes in water, gas production, pressure or other anomalies are identified.

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

Sincerely,

*Diane White*

Diane White

Enclosure

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Office of Oil and Gas

FEB 03 2020

WV Department of  
Environmental Protection



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

---

January 17, 2020

Enervest Operating Company  
300 Capitol Street  
Charleston, WV 25301

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

---

January 17, 2020

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

RE: Area of Review – McDonald 1211 Well Pad (N-1H to N-5H, S-7H – S9H)  
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**HG Energy, LLC**  
5260 Dupont Road  
Parkersburg, WV 26101  
(304) 420-1100 - Office  
(304) 863-3172 - Fax

---

January 17, 2020

CONSOL Gas Company  
1000 CONSOL Energy Drive  
Cannonsburg, PA 16317

RE: Area of Review – McDonald 1211 Well Pad (N-1H to N-5H, S-7H – S9H)  
Hydraulic Fracturing Notice

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Sincerely,

Diane White

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Office of Oil and Gas

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WV Department of  
Environmental Protection





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

---

January 17, 2020

Waco Oil and Gas Company  
1595 US Highway 33 E  
Glennville, WV 26351

RE: Area of Review – McDonald 1211 Well Pad (N-1H to N-5H, S-7H – S9H)  
Hydraulic Fracturing Notice

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Sincerely,

*Diane White*

Diane White

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Office of Oil and Gas

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WV Department of  
Environmental Protection



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

January 17, 2020

Clowser Well Service, Inc.  
805 Charlie Brown Road  
Salem, WV 26426

RE: Area of Review – McDonald 1211 Well Pad (N-1H to N-5H, S-7H – S9H)  
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Sincerely,

*Diane White*

Diane White

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Environmental Protection



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

January 17, 2020

Greylock Conventional, LLC.  
500 Corporate Landing  
Charleston, WV 25304

RE: Area of Review – McDonald 1211 Well Pad (N-1H to N-5H, S-7H – S9H)  
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Sincerely,

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Office of Oil and Gas

FEB 03 2020

WV Department of  
Environmental Protection



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

---

January 17, 2020

Alliance Petroleum Company  
101 McQuiston Drive  
Jackson Center, PA 16133

RE: Area of Review – McDonald 1211 Well Pad (N-1H to N-5H, S-7H – S9H)  
Hydraulic Fracturing Notice

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Enclosure

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Office of Oil and Gas

FEB 03 2020

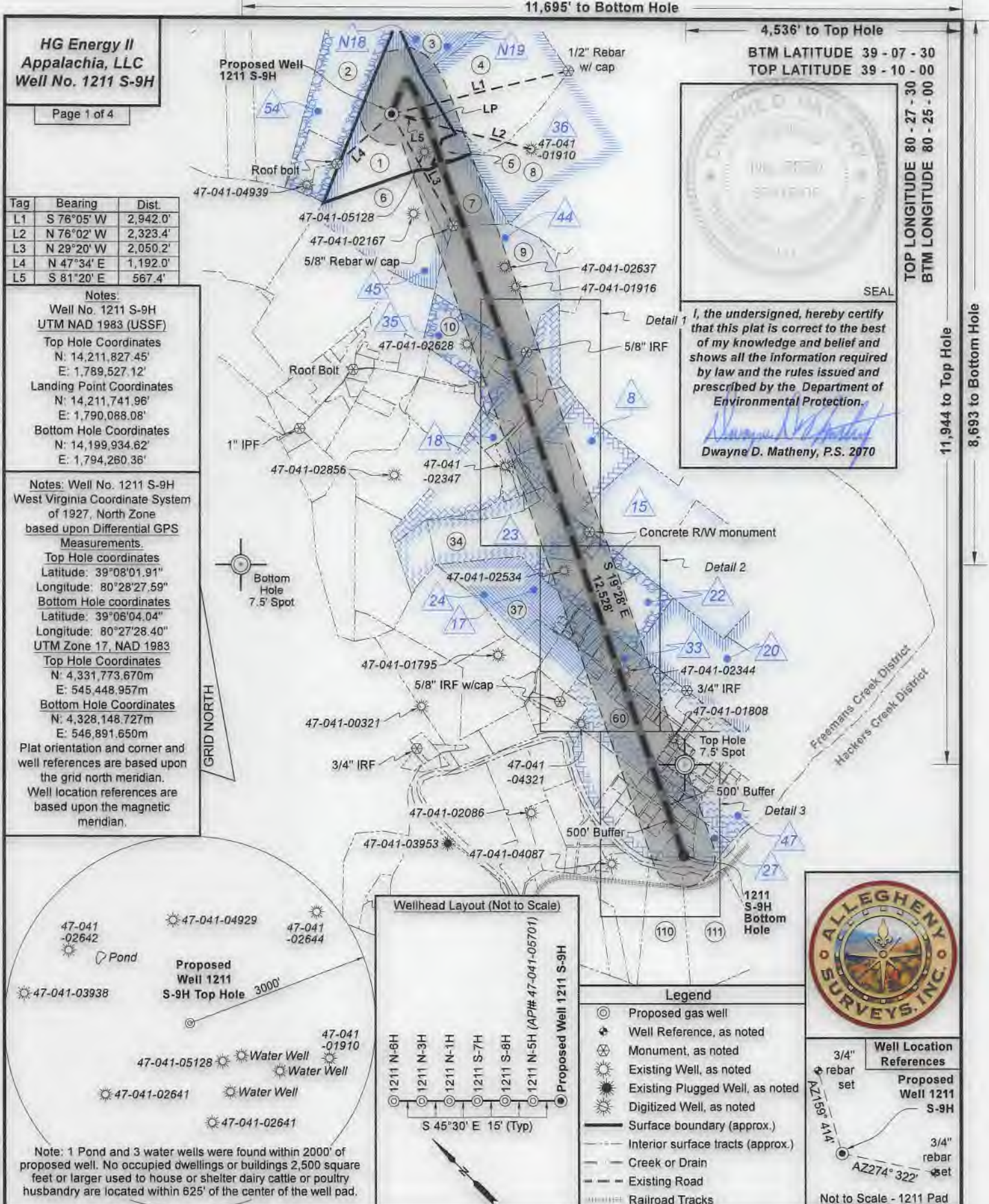
WV Department of  
Environmental Protection

SUBJECT WELL  
McDonald 1211 S-9H



◆ Denotes Possible Water Supply Source to be Tested

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



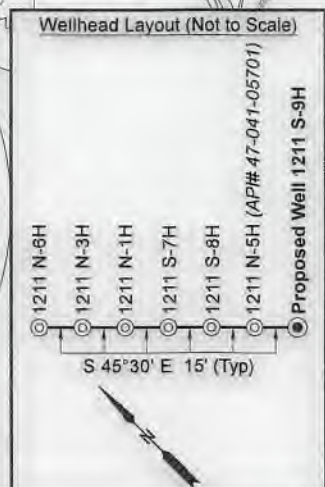
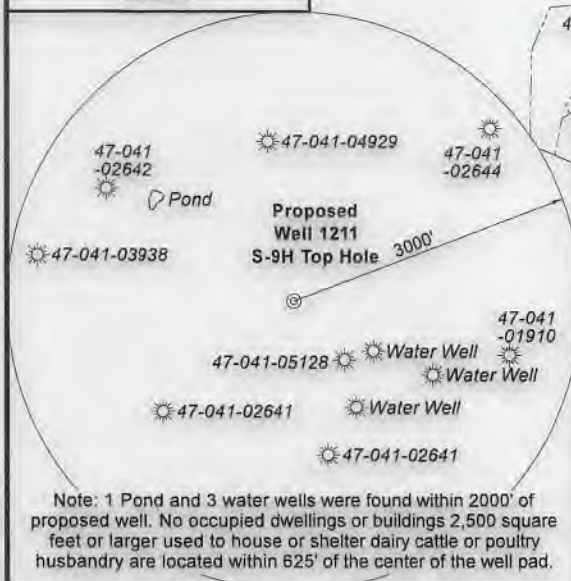
**HG Energy II  
Appalachia, LLC  
Well No. 1211 S-9H**

Page 1 of 4

Tag	Bearing	Dist.
L1	S 76°05' W	2,942.0'
L2	N 76°02' W	2,323.4'
L3	N 29°20' W	2,050.2'
L4	N 47°34' E	1,192.0'
L5	S 81°20' E	567.4'

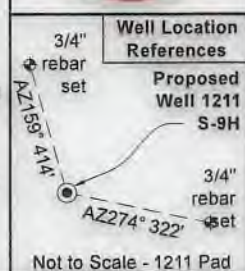
**Notes:**  
Well No. 1211 S-9H  
UTM NAD 1983 (USSF)  
Top Hole Coordinates  
N: 14,211,827.45'  
E: 1,789,527.12'  
Landing Point Coordinates  
N: 14,211,741.96'  
E: 1,790,088.08'  
Bottom Hole Coordinates  
N: 14,199,934.62'  
E: 1,794,260.36'

**Notes:** Well No. 1211 S-9H  
West Virginia Coordinate System  
of 1927, North Zone  
based upon Differential GPS  
Measurements.  
Top Hole coordinates  
Latitude: 39°08'01.91"  
Longitude: 80°28'27.59"  
Bottom Hole coordinates  
Latitude: 39°08'04.04"  
Longitude: 80°27'28.40"  
UTM Zone 17, NAD 1983  
Top Hole Coordinates  
N: 4,331,773.670m  
E: 545,448.957m  
Bottom Hole Coordinates  
N: 4,328,148.727m  
E: 546,891.650m  
Plat orientation and corner and  
well references are based upon  
the grid north meridian.  
Well location references are  
based upon the magnetic  
meridian.



**Legend**

- Proposed gas well
- Well Reference, as noted
- Monument, as noted
- Existing Well, as noted
- Existing Plugged Well, as noted
- Digitized Well, as noted
- Surface boundary (approx.)
- Interior surface tracts (approx.)
- Creek or Drain
- Existing Road
- Railroad Tracks



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 rules issued and prescribed by the Department of Environmental Protection.

*Dwayne D. Matheny*  
Dwayne D. Matheny, P.S. 2070

FILE NO: 79-36-12-U-F-18  
DRAWING NO: 1211 S-9H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: Submeter  
PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

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

DATE: December 13 20 19  
OPERATOR'S WELL NO. 1211 S-9H  
API WELL NO. 47-041-05706  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1,265.5' WATERSHED: Middle West Fork Creek  
DISTRICT: Freemans Creek QUADRANGLE: BH - Weston  
SURFACE OWNER: HG Energy II Appalachia, LLC COUNTY: Lewis  
ROYALTY OWNER: Mary E. Post, et al, et al LEASE NO: ACREAGE: 145.00  
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,811' MD

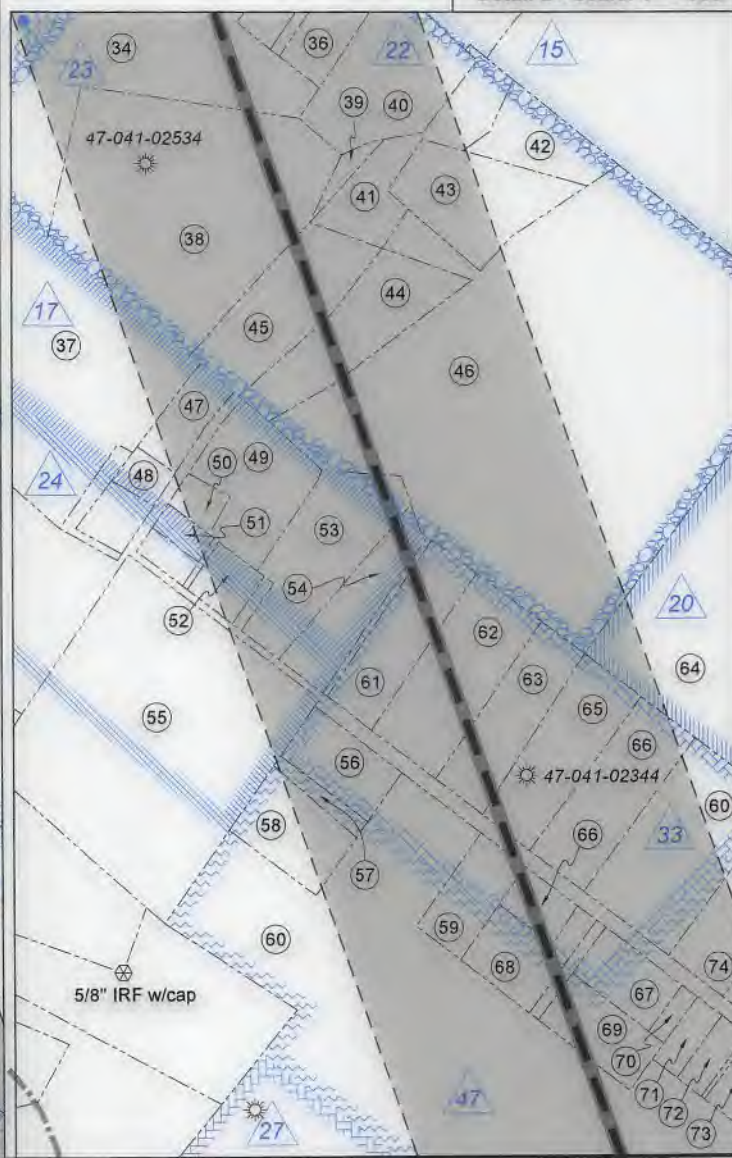
WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White  
ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101



Detail 1 - Scale: 1" = 500'



Detail 2 - Scale: 1" = 500'



FILE NO: 79-36-12-U-F-18  
DRAWING NO: 1211 S-9H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY:  
Submeter  
PROVEN SOURCE OF ELEVATION:  
CORS, Bridgeport, WV

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

DATE: December 13 20 19  
OPERATOR'S WELL NO. 1211 S-9H  
API WELL NO WV  
47 - 041 - 05704  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1,265.5' WATERSHED: Middle West Fork Creek

TH - West Milford  
QUADRANGLE: BH - Weston

DISTRICT: Freemans Creek

COUNTY: Lewis

SURFACE OWNER: HG Energy II Appalachia, LLC

ACREAGE: 61.50

ROYALTY OWNER: Mary E. Post, et al, et al

LEASE NO: \_\_\_\_\_ ACREAGE: 145.00

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ 6,800' TVD

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,811' MD

WELL OPERATOR: HG Energy II Appalachia, LLC

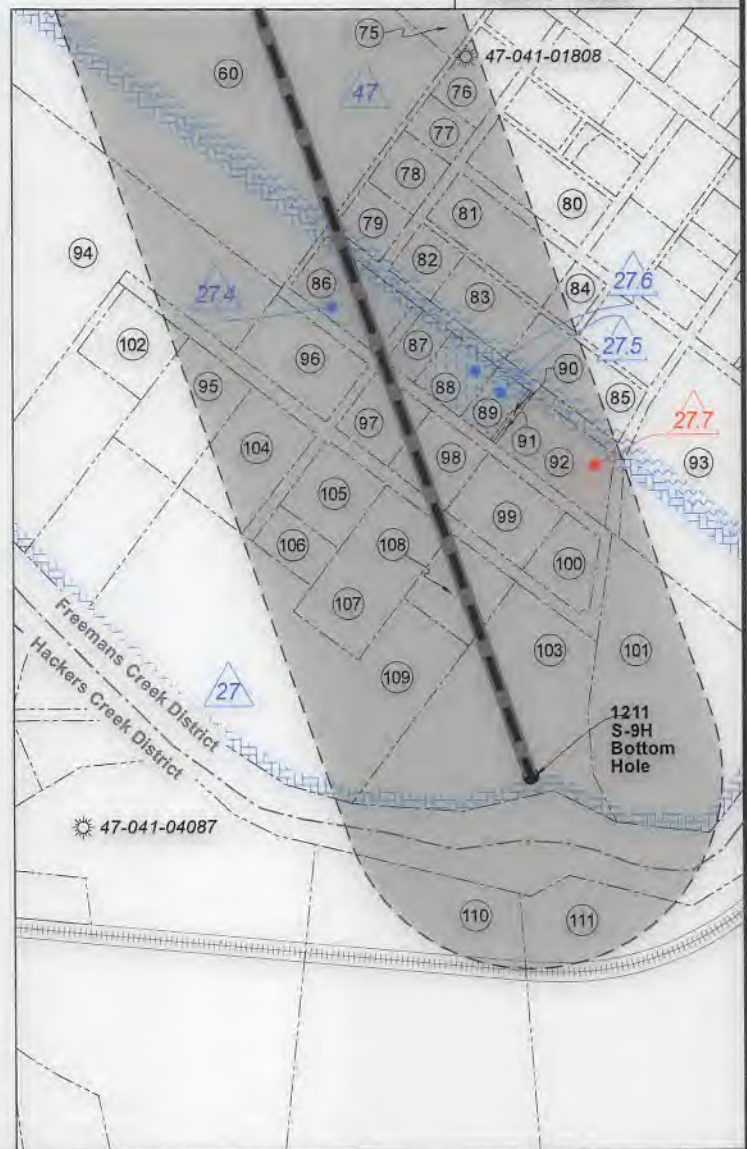
DESIGNATED AGENT: Diane C. White

ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101

ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101



Detail 3 - Scale: 1" = 500'



ID	Lease
8	T.S. Allman, et al
15	C.W. Smith, et al
17	Maggie Cottrill
18	Cordelia Bailey
20	E.C. Strother, et al
22	C. Burke Morris, et al
23	C. Burke Morris, et al
24	A.B. College Inc.
27	E.R. Bennett, et al
27.4	Betty M. Paugh
27.5	William C. & Mable Smarr
27.6	Freddie L. & Betty G. Fox
27.7	UNLEASED
33	H.A. Fletcher, et al
35	Jesse Leeson, et al
36	George W. Nelly, et al
44	T.P. Barb, et al
45	Mary E. Post, et al
47	Minter E. Bailey
54	HG Energy II Appalachia, LLC
N18	Arthur Beeghley & et al
N19	James Beeghley, et al

FILE NO: 79-36-12-U-F-18  
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 API WELL NO 47-041-05706  
 47 - 041 - 05706  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1,265.5' WATERSHED: Middle West Fork Creek  
 DISTRICT: Freemans Creek

TH - West Milford  
 QUADRANGLE: BH - Weston  
 COUNTY: Lewis  
 ACREAGE: 61.50

SURFACE OWNER: HG Energy II Appalachia, LLC

ROYALTY OWNER: Mary E. Post, et al, et al

LEASE NO: \_\_\_\_\_ ACREAGE: 145.00

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,811' MD 6,800' TVD

WELL OPERATOR: HG Energy II Appalachia, LLC

DESIGNATED AGENT: Diane C. White

ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101

ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101





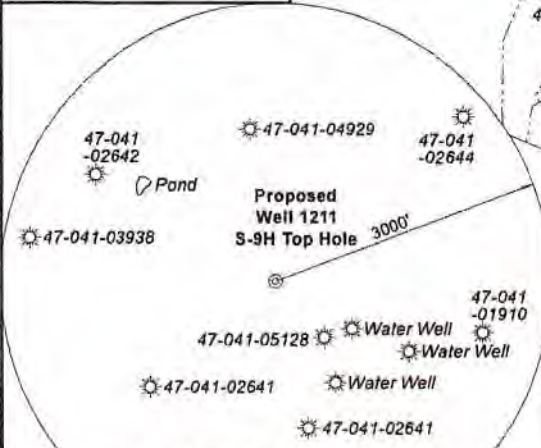
**HG Energy II  
Appalachia, LLC  
Well No. 1211 S-9H**

Page 1 of 4

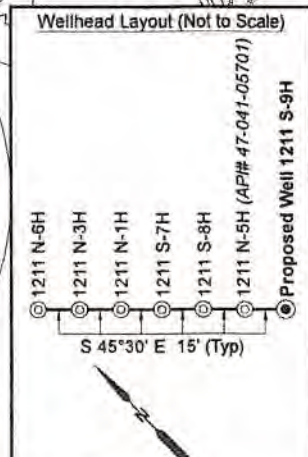
Tag	Bearing	Dist.
L1	S 76°05' W	2,942.0'
L2	N 76°02' W	2,323.4'
L3	N 29°20' W	2,050.2'
L4	N 47°34' E	1,192.0'
L5	S 81°20' E	567.4'

**Notes:**  
Well No. 1211 S-9H  
UTM NAD 1983 (USSF)  
Top Hole Coordinates  
N: 14,211,827.45'  
E: 1,789,527.12'  
Landing Point Coordinates  
N: 14,211,741.96'  
E: 1,790,088.08'  
Bottom Hole Coordinates  
N: 14,199,934.62'  
E: 1,794,260.36'

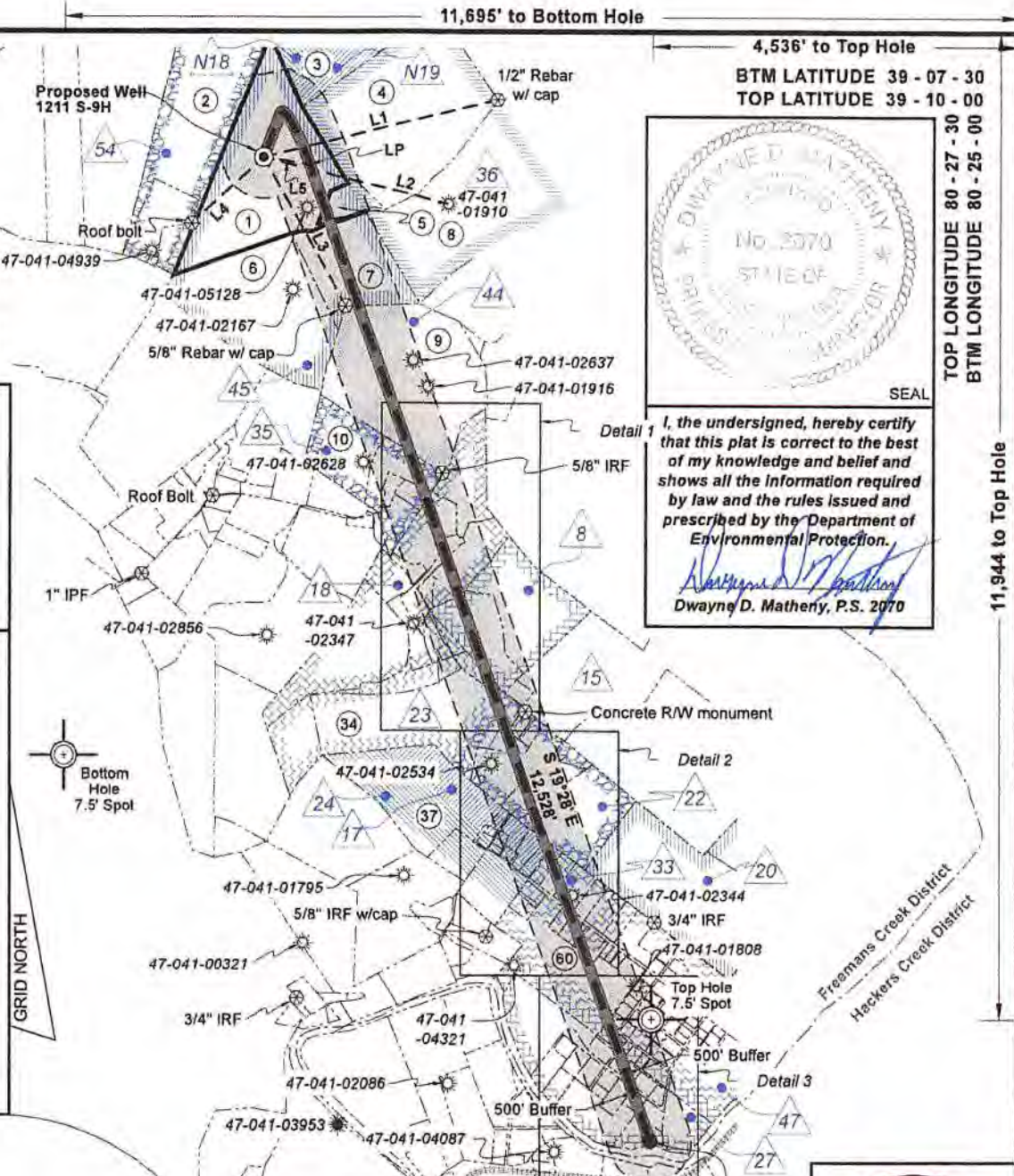
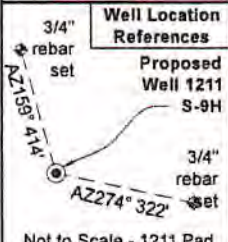
**Notes:** Well No. 1211 S-9H  
West Virginia Coordinate System  
of 1927, North Zone  
based upon Differential GPS  
Measurements.  
Top Hole coordinates  
Latitude: 39°08'01.91"  
Longitude: 80°28'27.59"  
Bottom Hole coordinates  
Latitude: 39°06'04.04"  
Longitude: 80°27'28.40"  
UTM Zone 17, NAD 1983  
Top Hole Coordinates  
N: 4,331,773.670m  
E: 545,448.957m  
Bottom Hole Coordinates  
N: 4,328,148.727m  
E: 546,891.650m  
Plat orientation and corner and  
well references are based upon  
the grid north meridian.  
Well location references are  
based upon the magnetic  
meridian.



Note: 1 Pond and 3 water wells were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.



- Legend**
- ⊙ Proposed gas well
  - ⊕ Well Reference, as noted
  - ⊛ Monument, as noted
  - ⊙ Existing Well, as noted
  - ⊙ Existing Plugged Well, as noted
  - ⊙ Digitized Well, as noted
  - Surface boundary (approx.)
  - - - Interior surface tracts (approx.)
  - - - Creek or Drain
  - - - Existing Road
  - - - Railroad Tracks



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 rules issued and prescribed by the Department of Environmental Protection.

*Dwayne D. Matherly*  
Dwayne D. Matherly, P.S. 2070

TOP LONGITUDE 80 - 27 - 30  
BTM LONGITUDE 80 - 25 - 00

11,944 to Top Hole  
8,693 to Bottom Hole

FILE NO: 79-36-12-U-F-18  
DRAWING NO: 1211 S-9H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: Submeter  
PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

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

DATE: December 13 20 19  
OPERATOR'S WELL NO. 1211 S-9H  
API WELL NO **HW6A**  
47 - 041 - 05706  
STATE COUNTY PERMIT

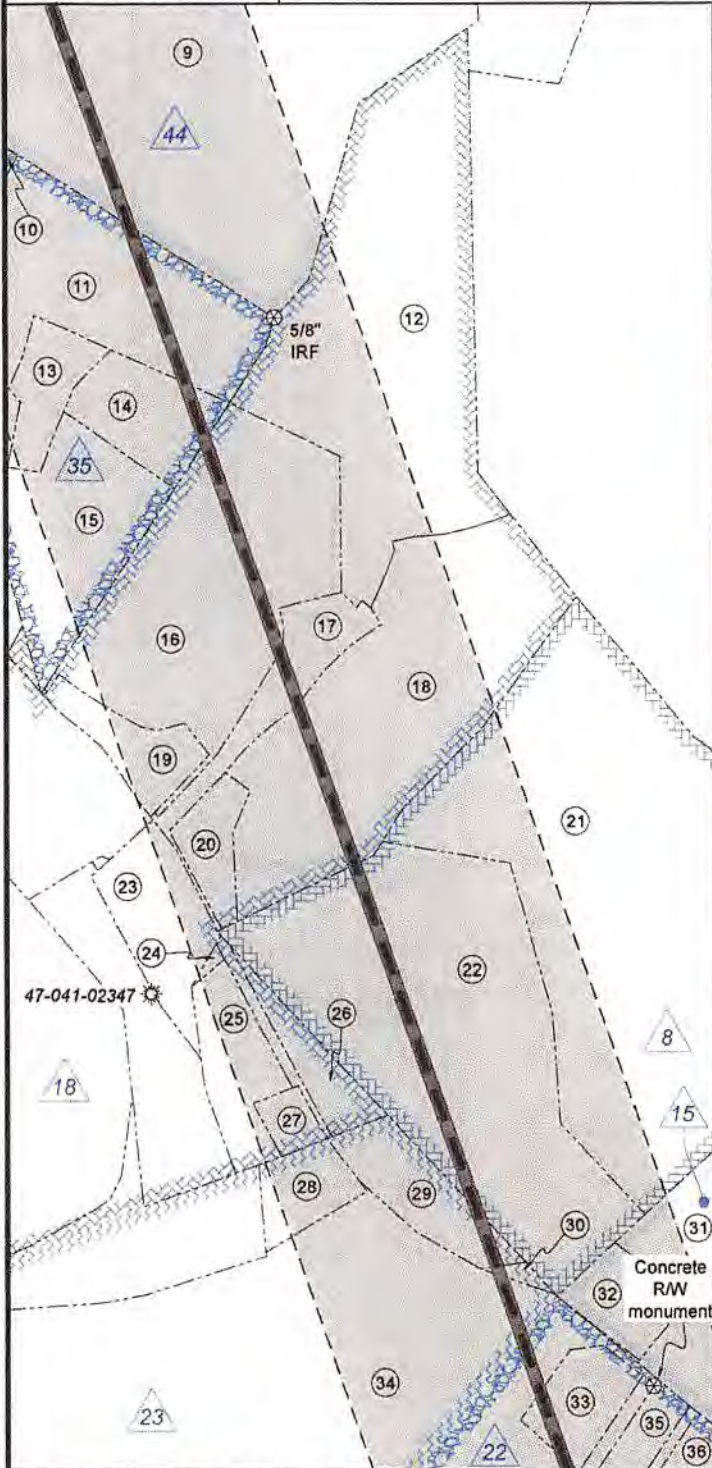
WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1,265.5' WATERSHED: Middle West Fork Creek  
DISTRICT: Freemans Creek  
SURFACE OWNER: HG Energy II Appalachia, LLC  
ROYALTY OWNER: Mary E. Post, et al, et al LEASE NO: ACREAGE: 145.00  
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ 6,800' TVD  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,811' MD

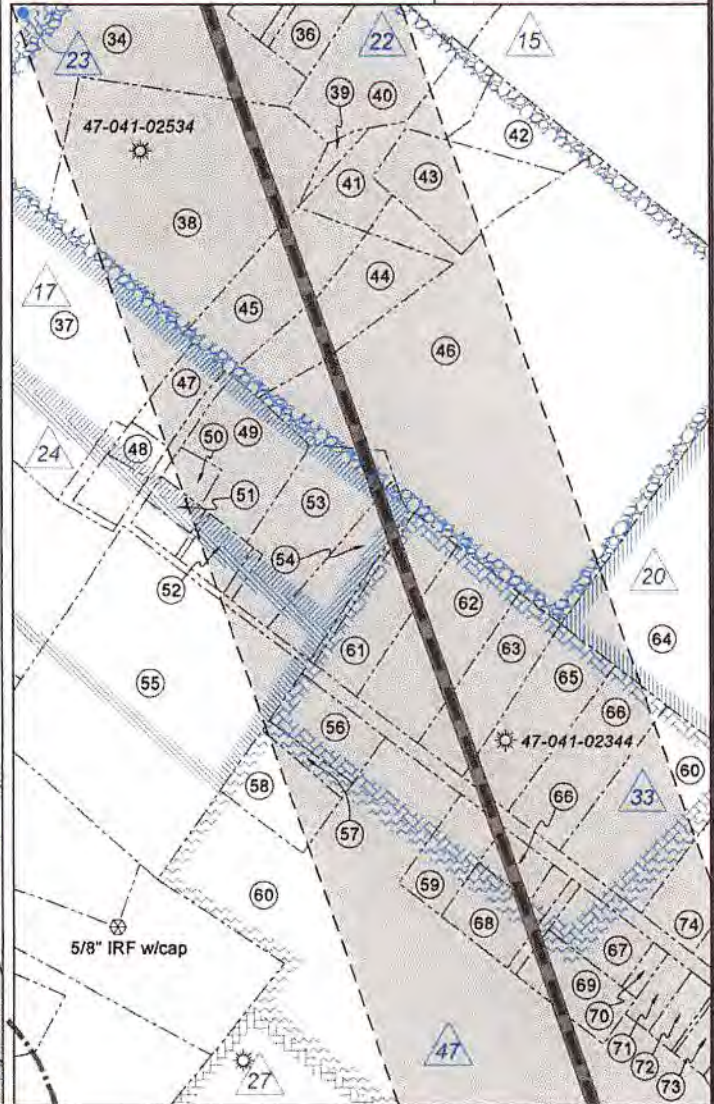
WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White  
ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101



Detail 1 - Scale: 1" = 500'



Detail 2 - Scale: 1" = 500'



FILE NO: 79-36-12-U-F-18  
DRAWING NO: 1211 S-9H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY:  
Submeter  
PROVEN SOURCE OF ELEVATION:  
CORS, Bridgeport, WV

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

DATE: December 13 20 19  
OPERATOR'S WELL NO. 1211 S-9H  
API WELL NO **H4A**  
47 - 041 - 05706  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1,265.5' WATERSHED: Middle West Fork Creek  
DISTRICT: Freemans Creek

TH - West Milford  
QUADRANGLE: BH - Weston  
COUNTY: Lewis  
ACREAGE: 61.50

SURFACE OWNER: HG Energy II Appalachia, LLC  
ROYALTY OWNER: Mary E. Post, et al, et al

LEASE NO: \_\_\_\_\_ ACREAGE: 145.00

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

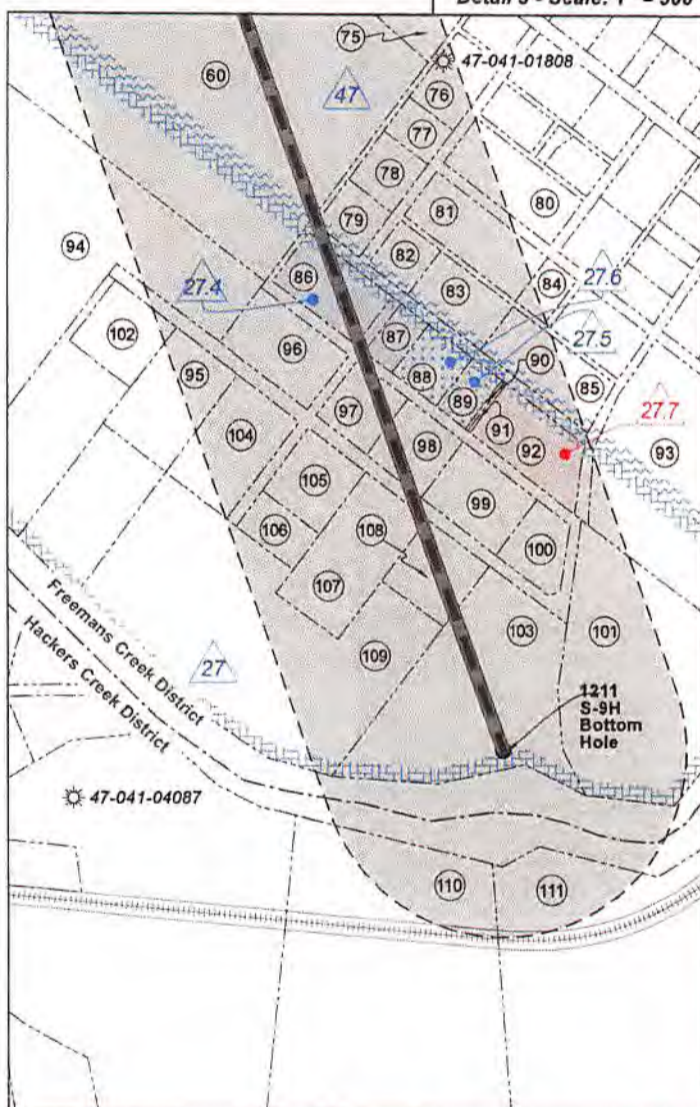
PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,811' MD 6,800' TVD

WELL OPERATOR: HG Energy II Appalachia, LLC  
ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101

DESIGNATED AGENT: Diane C. White  
ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101



Detail 3 - Scale: 1" = 500'



ID	Lease
8	T.S. Allman, et al
15	C.W. Smith, et al
17	Maggie Cottrill
18	Cordelia Bailey
20	E.C. Strother, et al
22	C. Burke Morris, et al
23	C. Burke Morris, et al
24	A B. College Inc.
27	E.R. Bennett, et al
27.4	Betty M. Paugh
27.5	William C. & Mable Smarr
27.6	Freddie L. & Betty G. Fox
27.7	UNLEASED
33	H.A. Fletcher, et al
35	Jesse Leeson, et al
36	George W. Nelly, et al
44	T.P. Barb, et al
45	Mary E. Post, et al
47	Minter E. Bailey
54	HG Energy II Appalachia, LLC
N18	Arthur Beeghley & et al
N19	James Beeghley, et al

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FEB 03 2020  
WV Department of  
Environmental Protection

FILE NO: 79-36-12-U-F-18  
DRAWING NO: 1211 S-9H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY:  
Submeter  
PROVEN SOURCE OF ELEVATION:  
CORS, Bridgeport, WV

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

DATE: December 13 20 19  
OPERATOR'S WELL NO. 1211 S-9H  
API WELL NO  
47 - 041 - 05706  
STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
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Parkersburg, WV 26101

DESIGNATED AGENT: Diane C. White

ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101

TH - West Milford  
QUADRANGLE: BH - Weston  
COUNTY: Lewis  
ACREAGE: 61.50

LEASE NO: \_\_\_\_\_ ACREAGE: 145.00



WW-6A1  
(5/13)

Operator's Well No. McDonald 1211 S-9H

**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 \*\*

**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

RECEIVED  
Office of Oil and Gas

FEB 03 2020

Department of  
Mining

FEB 03 2020

McDonald 1211 S-9H LEASE CHAIN

TRACT #	LEGACY LEASE NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE
45	FK053254	03-007B-0010-0000 03-007B-0011-0000 03-007B-0013-0000 p/o 03-007B-0010-0001	Q10048600	MARY E. POST; J. L. POST; F. L. POST AND B. J. POST, HIS WIFE; IDA B. GASTON AND CLARK GASTON, HER HUSBAND; G. W. POST AND FLAVA POST, HIS WIFE	RESERVE GAS COMPANY	NOT LESS THAN 1/8	68	291
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	620	139
				DOMINION EXPLORATION & PRODUCTION, INC.	DOMINION TRANSMISSION, INC.	ASSIGNMENT	651	137
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				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	723	499
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527
44	FK053246 / FK108079 FEE	03-007B-0014-0000 03-007B-0015-0000 p/o 03-007B-0017-0000	FK053246	T. P. BARB, SINGLE; AND J. H. MCKINLEY	RESERVE GAS COMPANY	NOT LESS THAN 1/8	68	305
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	727	765
				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	723	499
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	PARTIAL ASSIGNMENT	748	472
				JESSE LEESON AND SUSIE LEESON, HIS WIFE	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	44	278
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	85	127
HOPE NATURAL GAS COMPANY	RESERVE GAS COMPANY	ASSIGNMENT	79	370				
RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202				
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89				
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127				
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS					
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1				
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139				
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527				

1209S LEASE CHAIN

				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499
				D. CORDELIA BAILEY	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	42	38
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	85	127
				HOPE NATURAL GAS COMPANY	RESERVE GAS COMPANY	ASSIGNMENT	79	370
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499
				VIRGINIA B. ALLMAN, GUARDIAN FOR IDA N. ALLMAN, RESSA ALLMAN, OLA ALLMAN, AND MYRTLE B. ALLMAN, INFANT HEIRS OF D. S. ALLMAN, DEC'D (4/7)	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	42	21
				JOHN ALLMAN AND LILLIE M. ALLMAN, HIS WIFE; VIRGINIA B. ALLMAN; J. L. ALLMAN AND J. M. ALLMAN, HIS WIFE; AND J. M. ALLMAN (3/7)	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	42	23
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	85	127
				HOPE NATURAL GAS COMPANY	RESERVE GAS COMPANY	ASSIGNMENT	79	370
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
				C. BURKE MORRIS AND CHRISTINE MORRIS, HIS WIFE; MRS. DANIEL HEEFNER AND DANIEL HEEFNER, HER HUSBAND	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	209	451
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527

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				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499
				TRUSTEES OF MCCANS RUN METHODIST CHURCH, D. D. REXROAD, H.L.FRASHUER,OLA ALLMAN, AND WEAVER BARBE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	219	215
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
				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	723	499
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527

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15	FK053232	03-007C-0057-0000 03-007C-0057-0001 03-007C-0052-0002 p/o 03-007C-0041-0000	Q100900000	C. W. SMITH AND S. A. SMITH, HIS WIFE	RESERVE GAS COMPANY	NOT LESS THAN 1/8	68	136
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				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	723	499
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527				
22	FK064402	p/o 03-007C-0026-0000 p/o 03-007C-0026-0001 03-007C-0026-0002 03-007C-0026-0003 03-007C-0026-0004 03-007C-0043-0000 03-007C-0043-0001 03-007C-0044-0000 03-007C-0045-0000 03-007C-0046-0000 03-007C-0047-0000 03-007C-0048-0000 03-007C-0054-0000 03-007C-0054-0001 03-007C-0055-0000 03-007C-0056-0000 03-007C-0056-0001	Q100702000	C. BURKE MORRIS AND CHRISTINE H. MORRIS, HIS WIFE; MABEL SMITH HEEFNER AND DANIEL HEEFNER, HER HUSBAND; B. E. WILLIAMS, WIDOWER; FRENCH M. WILLIAMS AND MAE WILLIAMS, HIS WIFE; MYRTLE WILLIAMS, WIDOW; MYRTLE WILLIAMS, GUARDIAN; LUCY M. GARTON, WIDOW; JAMES GARTON AND DELPHIA GARTON, HIS WIFE; NELLIE NICHOLAS, WIDOW; G. C. MCWHORTER AND ANNA MCWHORTER, HIS WIFE; AND H. D. WILLIAMS AND IDA O. WILLIAMS, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	222	10
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
				MAGGIE COTTRILL, WIDOW	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	219	487
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS					
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1				
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139				
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527				
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499				
17	FK064209	p/o 03-0003-0001-0000 p/o 03-0003-0002-0000 p/o 03-0003-0006-0000 p/o 03-007C-0025-0000 p/o 03-007C-0049-0000	Q100975000	HENRY A. FLETCHER AND MARY L. FLETCHER, HIS WIFE	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	42	73
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	85	127
				HOPE NATURAL GAS COMPANY	RESERVE GAS COMPANY	ASSIGNMENT	79	370
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	MERGER/NAME CHANGE	WVSOS	
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				03-0003-0008-0000 03-0003-0008-0001 03-0003-0009-0001				

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33	FK053189	p/o 03-0003-0009-0002 03-0003-0009-0004 03-0003-0011-0000 03-0003-0011-0001 p/o 03-0003-0012-0000 p/o 03-0003-0013 03-007C-0053-0001 03-007C-0053-0002 p/o 03-007C-0053-0004 03-007C-0053-0007 03-007C-0053-0012	Q100384000	CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127		
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS			
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS			
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154		
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57		
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848		
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1		
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139		
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS			
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527		
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499		
				ALDERSON BROADDUS COLLEGE, INC.	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	212	305		
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89		
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127		
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS			
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS			
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154		
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57		
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848		
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1		
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139		
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS			
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527		
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499		
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558						
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	736	220						
24	FK062279	p/o 03-0003-0001-0000 p/o 03-0003-0001-0001 03-0003-0003-0000 03-0003-0004-0000 p/o 03-0003-0002-0000 p/o 03-0003-0006-0000 p/o 03-007C-0023-0000 03-007C-0024-0000 p/o 03-007C-0025-0000 03-007C-0050-0000 03-007C-0050-0001 p/o 03-007C-0051-0000	Q100357000	03-0001-0001-0000 THRU 03-0001-0009-0000	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	NOT LESS THAN 1/8	692	570	
				03-0001-0009-0001 03-0001-0009-0002 03-0001-0009-0003						
				03-0001-0010-0000 THRU 03-0001-0024-0000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57	
				03-0001-0026-0000 03-0001-0026-0001 03-0001-0027-0000 03-0001-0028-0000 03-0001-0029-0000 03-0001-0029-0001 03-0001-0031-0000 03-0001-0032-0000 03-0001-0032-0001	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154	
				03-0001-0034-0000 THRU 03-0001-0046-0000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1	
				03-0001-0050-0000 03-0001-0050-0001						
				03-0001-0052-0000 THRU 03-0001-0064-0000	NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170	
				p/o 03-0001-0069-0000 03-0001-0070-0000 03-0001-0071-0000	DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS		

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		03-0001-0074-0000 03-0001-0079-0000 03-0001-0081-0000 03-0003-0009-0000 p/o 03-0003-0009-0002		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499
		03-0003-0012-0000 THRU 03-0003-0015-0000		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
		03-0003-0015-0001 03-007C-0053-0000 03-007C-0053-0011 03-007C-0053-0003 03-007C-0053-0006 p/o 03-007C-0053-0004 p/o 03-007C-0020-0001		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	MINERAL DEED	740	746
27		03-0001-0008-0000, 03-0001-0009-0000	HGII120	BETTY M PAUGH	HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8	737	158
27.4		03-0001-0009-0001	HGII107	WILLIAM C SMARR AND MABLE SMARR	HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8	732	863
27.5		03-0001-0009-0002	HGII082	FREDDIE LEE FOX AND BETTY G FOX	HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8	734	287
27	FK072684 FK072646 FK075940	03-0001-0008-0000 03-0001-0009-0000 03-0001-0009-0001 03-0001-0009-0002 03-0001-0050-0000 03-0001-0050-0001 03-007C-0052-0006 03-007C-0052-0007 03-007C-0052-0008 03-007C-0052-0013	Q100574000 Q100739000 Q100573000	GEORGE JOSEPH GARTON AND JEANNE V. GARTON, HIS WIFE; CHARLES E. GARTON AND OPAL D. GARTON, HIS WIFE; MARY CATHERINE ROBERTS AND TERRELL N. ROBERTS, HER HUSBAND	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	285	554
				E. RAY BENNETT AND HAZEL L. BENNETT, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	285	248
				HARRY V. CAMPBELL, HUGH A. CURRY, JOHN S. ALFRIEND AND THOMAS B. JACKSON, TRUSTEES OF THE EPISCOPAL CHURCH OF WEST VIRGINIA	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	299	418
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	CORRECTIVE ASSIGNMENT	725	784
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
						03-007D-0045-0000 THRU 03-007D-0059-0000		DOMINION ENERGY TRANSMISSION, INC.
		p/o 03-0001-0074-0000 p/o 03-007C-0053-0004		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527



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

4704105706

January 14, 2020

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

RE: Drilling Under Roads – McDonald 1211 S-9H  
Freeman District, Lewis County  
West Virginia

Dear Ms. Adkins:

HG Energy II Appalachia, LLC, is submitting the attached application for a new well work permit for the McDonald 1211 well pad. As an authorized representative, I certify HG Energy II Appalachia, LLC, has the right to drill, stimulate, extract, produce and market the oil, gas or condensate for all leases through which the McDonald 1211 laterals will drill through including any and all roads crossed under as identified on the attached survey plat.

Should you have any questions or desire further information, please contact me at [dwhite@hgenergyllc.com](mailto:dwhite@hgenergyllc.com) or 304-420-1119.

Very truly yours,

*Diane White*

Diane C. White

Enclosures

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

Date of Notice Certification: 01/17/2020

API No. 47- 041 - 05706 HWA  
Operator's Well No. McDonald 1211 S-9H  
Well Pad Name: McDonald Well Pad

**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>545449.0</u>
County:	<u>Lewis</u>		Northing:	<u>4331773.7</u>
District:	<u>Freemans Creek</u>	Public Road Access:	<u>SR 1 / Hollick Run Road</u>	
Quadrangle:	<u>West Milford</u>	Generally used farm name:	<u>McDonald</u>	
Watershed:	<u>Middle West Fork Creek</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 checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input 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><b>OOG OFFICE USE ONLY</b></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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**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.

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**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 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 17th day of January, 2020.

*Mark J Schall* Notary Public

My Commission Expires 11/2/2021

**Oil and Gas Privacy Notice:**

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

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WV Department of  
Environmental Protection

WW-6A  
(9-13)

API NO. 47- 041 - 05706 HGA  
OPERATOR WELL NO. McDonald 1211 S-9H  
Well Pad Name: McDonald 1211

**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:** 01/14/20 **Date Permit Application Filed:** 01/16/20

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) \* *Surface Owner not noticed*

Name: HG Energy II Appalachia, LLC (Pad and Road)  
Address: 5260 Dupont Road  
Parkersburg, WV 26101

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Road and/or Other Disturbance)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER(s) (Impoundments or Pits)

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OPERATOR

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: <u>Charles &amp; Vanessa Brosius</u>	<u>Melvin &amp; Terri Woods</u>
Address: <u>1050 Hollick Run Road</u>	<u>54 Orchard Drive</u>
<u>Jane Lew, WV 26378</u>	<u>Jane Lew, WV 26378</u>

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: Dominion Energy Transmission - Attn: Ronald Waldren  
Address: 925 White Oaks Blvd  
Bridgeport, WV 26330

\*Please attach additional forms if necessary

RECEIVED  
Office of Oil and Gas

FEB 03 2020

WV Department of  
Environmental Protection



**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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://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 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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WV Department of  
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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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WV Department of  
Environmental Protection

WW-6A  
(8-13)

API NO. 47- \_\_\_\_\_ - \_\_\_\_\_  
OPERATOR WELL NO. McDonald 1211 S-9H  
Well Pad Name: McDonald 1211

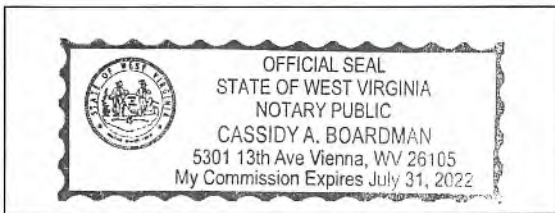
**Notice is hereby given by:**

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

Address: 5260 Dupont Road  
Parkersburg, WV 26101  
Facsimile: 304-863-2172

**Oil and Gas Privacy Notice:**

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



Subscribed and sworn before me this 14th day of January, 2020.

Cassidy A Boardman Notary Public

My Commission Expires 7/31/2022

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WV Department of  
Environmental Protection



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

---

January 14, 2020

Dominion Energy Transmission, Inc.  
Attn: Ron Walden  
925 White Oaks Blvd  
Bridgeport, WV 26330

RE: McDonald 1211 S-9H Well Work Permit Application - Notification  
Grant District, Harrison County  
West Virginia

Dear Mr. Walden:

Enclosed are copies of various application papers that we will be filing with the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas. A well work permit is being requested for the above-referenced well.

Pursuant to WV Code Chapter 22B, Article 6, you are receiving copies of this correspondence because the well or other anticipated disturbance is located on your surface property. Your rights as a surface owner (road) are detailed in the enclosed permit application papers.

No action on your part is required. If you have any questions or comments regarding this application, you may call this office at (304) 420-1119.

Very truly yours,

*Diane White*

Diane C. White

Enclosures

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WV Department of  
Environmental Protection



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

---

January 14, 2020

Charles & Vanessa Brosius  
1050 Hollick Run Road  
Jane Lew, WV 26378

RE: McDonald 1211 S-9H Well Work Permit Application - Notification  
Grant District, Harrison County  
West Virginia

Dear Mr. and Mrs. Brosius:

Enclosed are copies of various application papers that we will be filing with the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas. A well work permit is being requested for the above-referenced well.

Pursuant to WV Code Chapter 22B, Article 6, you are receiving copies of this correspondence because the well or other anticipated disturbance is located on your surface property. Your rights as a surface owner (road) are detailed in the enclosed permit application papers.

No action on your part is required. If you have any questions or comments regarding this application, you may call this office at (304) 420-1119.

Very truly yours,

*Diane White*

Diane C. White

Enclosures

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WV Department of  
Environmental Protection

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

**Notice Time Requirement:** Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry

**Date of Notice:** 11/04/19      **Date of Planned Entry:** 11/11/19

**Delivery method pursuant to West Virginia Code § 22-6A-10a**

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

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

**Notice is hereby provided to:**

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

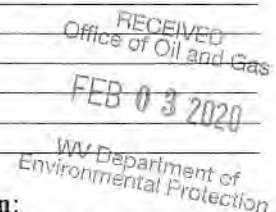
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
Name: NA  
Address: \_\_\_\_\_

MINERAL OWNER(s)  
Name: Mineral Owners  
Address: \_\_\_\_\_

\*please attach additional forms if necessary



**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.133956 &amp; 80.474144</u>
County: <u>Lewis</u>	Public Road Access: <u>SR 19/ Kincheloe Run / Hollick Run Road</u>
District: <u>Freeman's Creek</u>	Watershed: <u>Hollick Run</u>
Quadrangle: <u>West Milford 7.5'</u>	Generally used farm name: <u>McDonald</u>

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

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

**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](mailto:depprivacyofficer@wv.gov).



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

---

November 4, 2019

RE: McDonald 1211 S-9N  
Freeman's Creek District, Lewis County  
West Virginia

Dear

Enclosed is a copy of a Department of Environmental Protection "Notice of Entry For Plat Survey" form WW-6A3. This notice is provided to you as a royalty owner to advise you that HG Energy II Appalachia, LLC, is beginning the process of applying for permits to drill a well(s) where you are identified as an owner of minerals underlying such tract in the county tax records. A well work permit application will be filed with the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas.

Pursuant to WV Code Chapter 22B, Article 6, you are receiving copies of this correspondence because you are an owner of mineral rights on one or more of the underlying leases impacted by this well (s). Statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WVDEP at 304-926-0450, located at 601 57<sup>th</sup> Street, Charleston, WV. Copies of such documents or additional information related to horizontal drilling may also be obtained by visiting the WV DEP online.

No action on your part is required. If you have any questions or comments regarding this permit application, you may call this office at (304) 420-1119. Questions concerning lease issues may be directed to Mark Schall at 304-420-1115. Address inquiries should be directed to Bethanne Wilson at 304-370-3246.

Very truly yours,

*Diane White*

Diane C. White

Enclosures

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**WW-6A3**  
**(1-12)**

**McDonald 1211 S-9H**

**Page 1 Continued**

**Mineral Owners**

Charles E Garton Trust  
Deborah K Butler  
Po Box 1234  
Weston, WV 26452

Dora Jane Peek  
302 Harrison Ave  
Waltonville, IL 62894-1121

Elizabeth Francene Kirk  
986 Ashton PL  
Morgantown, WV 26508

Isabelle Marie Grisak  
3222 Green Oak Drive  
Commerce Township, MI 48390

James F. Davis  
Dower Interest of Evert W. Davis  
230 Woodmire Drive  
Milton, WV 25541-1177

JP Morgan, Trustee S. Austin Smith  
Trust Agreement dated Nov 21, 1958  
PO Box 659  
Wichita Falls, TX 76307

Martha Ann Burkhammer  
661 Spring Hills Drive  
Zionsville, IN 46071

Mary Diane Boso  
Dower Interest of Everett W. Davis  
8412 Le Marie Ct  
Denham Springs, LA 70706-1536

Michael Ross  
Po Box 219  
Coalton, WV 26257

Waco Oil and Gas Inc  
PO Box 880  
Glenville, WV 26351

William Michael McDonald  
Rt2 215-A  
Jane Lew, WV 26378

HG Energy II Appalachia LLC will *not*  
be noticed via certified mail

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**WEST VIRGINIA DEPARTMENT OF TRANSPORTATION**

**Division of Highways**

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

**Byrd E. White, III**  
Secretary of Transportation/  
Commissioner of Highways

**January 28, 2020**

**Jimmy Wriston, P. E.**  
Deputy Secretary/  
Deputy Commissioner

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

Subject: DOH Permit for the McDonald 1211 Pad, Lewis County  
1211 S-9H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #07-2019-0255 which has been issued to HG Energy, LLC for access to the State Road for a well site located off Lewis County Route 1/1 SLS.

This operator is in compliance with §22-6A-20 of the WV Code. Operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018.

Very Truly Yours,

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

Cc: Diane C. White  
HG Energy, LLC  
CH, OM, D-7  
File

FEB 03 2020

**List of Frac Additives by Chemical Name and CAS #**

**McDonald 1211 Well Pad (N-1H, N-3H, N-5H, S-7H, S-8H, S-9H)**

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	

**PROJECT OWNER/APPLICANT**  
**HG ENERGY II APPALACHIA, LLC**  
 5260 DUPONT ROAD  
 PARKERSBURG, WV 26101  
 PH: (304) 424-1100  
 CONTACT: JARED STUMPLE

**CIVIL ENGINEER**  
**SOIL & ENVIRONMENTAL CONSULTANTS, INC.**  
 600 MARKETPLACE AVENUE SUITE 200  
 BRIDGEPORT, WV 26330  
 PH: (304) 833-1119  
 CONTACT: THOMAS ADAMS, P.E.

**WVDOH**  
 DISTRICT SEVEN  
 PH: (304) 269-0400  
 CONTACT: DISTRICT ENGINEER  
 SHAWN COOPER, P.E.

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP)**  
 PH: (304) 542-3074

**NATIONAL RESPONSE CENTER**  
 PH: (304) 424-4422

# 1211 WELL PAD HG ENERGY II APPALACHIA, LLC PERMIT PLANS

FREEMANS CREEK DISTRICT, LEWIS COUNTY, WEST VIRGINIA

**SHEET INDEX**

- COVER SHEET
- MASTER LEGEND
- OVERALL SITE LAYOUT
- SITE LAYOUT
- SITE LAYOUT
- SITE LAYOUT
- SITE LAYOUT
- WELL PAD AND AST PAD SECTIONS
- ACCESS ROAD SECTIONS
- ACCESS ROAD SECTIONS
- ACCESS ROAD SECTIONS
- ACCESS ROAD SECTIONS
- AST ACCESS ROAD SECTIONS
- GENERAL NOTES
- DETAILS
- DETAILS
- DETAILS
- DETAILS
- RECLAMATION PLAN

- CONSTRUCTION SEQUENCE**
- PERK TO ENHANCEMENT OF ANY EXISTING DISTURBANCE ACTIVITY INCLUDING CLEANING AND GRADING. THE RESIDENT SHALL CALL WEST VIRGINIA BY BY NUMBER 811 OR 1-800-368-6882 TO IDENTIFY ALL UTILITY LINES. THE RESIDENT SHALL ALSO MUST CLEARLY IDENTIFY SENSITIVE AREAS, INCLUDING FOREST BUFFER ZONES, THE LIMITS OF CLEARING, AND TREES THAT ARE TO BE CONSERVED WITHIN THE PROJECT SITE, AND SHALL INSTALL APPROPRIATE BARRIERS WHERE EQUIPMENT MAY BE PARKED, STAGES, OPERATED, OR LOCATED FOR ANY PURPOSES.
  - SITE ACCESS** - THIS IS THE FIRST LAND-DISTURBANCE ACTIVITY TO TAKE PLACE AT THE SITE AND SHOULD PROVIDE BARS TO AVOID ACCELERATED EROSION AND SEDIMENTATION FROM THE FOLLOWING AREAS: ENTRANCE TO THE SITE, CONSTRUCTION ROUTES, AND AREAS DESIGNATED FOR EQUIPMENT OR OTHER USES AT THE SITE INCLUDING PARKING STAGES.
  - STORMWATER BARRIERS** - INSTALL PERIMETER BARRIERS AFTER THE CONSTRUCTION SITE IS ACCESSIBLE. NOTIFY APPROPRIATE AGENCIES AND GOVERNMENT AGENCIES TO OBTAIN ANY REQUIRED PERMITS FOR INSTALLING PERIMETER BARRIERS.
  - LAND CLEARING AND GRADING** - IMPLEMENT CLEARING AND GRADING ONLY AFTER ALL DOWNSTREAM BARS HAVE BEEN CONSTRUCTED AND OPERATIONAL.
  - SURFACE STABILIZATION** - APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY TO ANY DISTURBED AREAS WHERE WORK HAS REACHED FINAL GRADE. HAS BEEN CLASSIFIED OR OTHERWISE TEMPORARILY SUSPENDED.
  - CONSTRUCTION OF BUILDING, UTILITIES AND PAVING** - DURING CONSTRUCTION, INSTALL AND MAINTAIN ANY TEMPORARY EROSION AND SEDIMENT CONTROL BARS, AND IMPROVE ANY STRUCTURAL POST CONSTRUCTION STORMWATER BARRIERS THAT MAY BE REQUIRED.
  - FINAL COMPLETION OF PAD BRACING** - CONFINED THE BAR TO GRADE AND SCEN PLACEMENT OF PAD SOIL BARRIERS.
  - FINAL STABILIZATION, REPAIRING, TREES AND SHRUBS** - AFTER CONSTRUCTION IS COMPLETE, FINAL STABILIZATION BARS INCLUDING PERMANENT SYSTEMS, MULCHING, AND PLANTING, AND COMPLETE REVEGETATION OF DISTURBED AREAS IN THE FASTEST CONSTRUCTION PRACTICE. STABILIZE ALL OPEN AREAS, INCLUDING EROSION AND SEDIMENTATION, AND REMOVE ALL TEMPORARY BARS AND STABILIZATION MEASURES ACCORDING WITH THE REMOVAL OF THE BARS.

**1211 WELL PAD COORDINATES (UTM NAD83-17T)**

WELLS	NORTHING	EASTING	LATITUDE	LONGITUDE
N-3H	14211385.001	1789473.645	N039.134072	W080.474733
N-2H	14211389.492	1789484.339	N039.134073	W080.474294
N-4H	14211383.982	1789495.044	N039.134043	W080.477395
N-1H	14211384.473	1789505.727	N039.134014	W080.474219
N-5H	14211387.056	1789516.421	N039.133985	W080.474181
S-6H	14211389.940	1789544.938	N039.133928	W080.474081
S-7H	14211399.431	1789555.632	N039.133879	W080.474044
S-8H	14211388.921	1789566.326	N039.133850	W080.474005
S-30H	14211378.412	1789577.020	N039.133821	W080.473969
S-9H	14211367.503	1789587.714	N039.133792	W080.473931



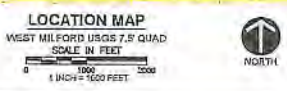
**LIMITS OF DISTURBANCE PARCEL BREAK UPS - 1211 WELL PAD**

OWNER	TM-PARCEL	DESD-PAGE	TOTAL ACRES	TYPE OF DISTURBANCE	ACERAGE
HG ENERGY II APPALACHIA, LLC	78-22	730-677	73.63	PARCEL INFORMATION	
				MAIN ACCESS ROAD	4.98
				AST ACCESS ROAD	1.00
HG ENERGY II APPALACHIA, LLC				AST PAD	1.26
				SPOL PILE	0.03
				TOPSOIL/STRIPPING PILE 1	0.51
				PARCEL TOTAL	8.00
				WELL PAD	6.73
HG ENERGY II APPALACHIA, LLC	78-10	730-677	61.5	PARCEL INFORMATION	
				MAIN ACCESS ROAD	3.06
				WELL PAD	6.73
				SPOL PILE	1.13
				TOPSOIL/STRIPPING PILE 2	3.05
				PARCEL TOTAL	12.96
				TOTAL	20.94
			WOODED	36.38	

**GRADING VOLUMES**

DESCRIPTION	CUT (CY)	FILL (CY)	NET (CY)
MAIN ACCESS ROAD	26,413	32,241	-3,828
AST PAD ACCESS	702	248	454
WELL PAD	47,843	37,730	10,113
AST PAD	285	1,820	-1,535
SPOL PILE	0	5,220	-5,220
TOTAL	77,243	77,244	0
TOPSOIL / STRIPPING WITH 20% SWELL	[14,346 CY]		14,346 C.Y.
TOTAL EXCAVATION	85,229	85,229	0

NOTE: TOPSOIL/STRIPPING THICKNESS FOR REMOVAL AND REPLACEMENT WAS CALCULATED WITH AN ESTIMATED DEPTH OF 6"



**LOCAL EMERGENCY SERVICES**

AVAILANCE	NAME	TELEPHONE NO.
HOSPITAL EMERGENCY ROOM	UNITED HOSPITAL CENTER	(681) 542-1000
FIRE DEPARTMENT		911
POLICE DEPARTMENT		911
POISON CONTROL CENTER	WEST VIRGINIA POISON CENTER	(800) 222-1222

**FLOOD PLAN CONDITIONS**

DO SITE/CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:	NO
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:	NO
IF HAS STUDY COMPLETED:	NA
FLOODPLAIN ELEVATION ON DRAWINGS:	NA
FROM NAV TIDAL GAUGE FOR DATE: [ ] (EARTHQUAKE)	
INCREASE OF CONSTRUCTION IN FLOODPLAIN: [ ] (0.00) AS	

**WELL RESTRICTIONS CHECKLIST (HORIZONTAL OR WELL)**

AT LEAST 100 FEET FROM PAD AND LOD (INCLUDING ANY EAS CONTROL FEATURES) TO ANY PERMANENT STREAM, LAKE, POND, RESERVOIR OR WETLAND:	NO
AT LEAST 100 FEET FROM PAD AND LOD INCLUDING ANY EAS CONTROL FEATURES TO ANY NATURALLY PRODUCING TIGHT STRATA:	YES
AT LEAST 100 FEET FROM PAD AND LOD (INCLUDING ANY EAS CONTROL FEATURES) TO ANY GROUNDWATER STRATA OR PUBLIC WATER SUPPLY:	YES
AT LEAST 200 FEET FROM AN EXISTING WATER WELL OR DEVELOPED SPRING TO WELL BUNG OR LID:	YES
AT LEAST 60 FEET FROM AN OCCUPIED DWELLING STRUCTURE TO CENTERS OF PAD:	YES
AT LEAST 60 FEET FROM AGRICULTURAL BUILDINGS LARGER THAN 2000 SQUARE FEET TO THE CENTER OF THE PAD:	YES

**PLAN REPRODUCTION WARNING**  
 THE PLANS HAVE BEEN CREATED ON AN 8 1/2" X 11" SHEETS. FOR REDUCTIONS, REFER TO DRAWING SCALE.  
 THE PLANS HAVE BEEN CREATED FOR FULL COLOR PLOTTING. ANY SET OF THE PLANS THAT IS NOT PLOTTED IN FULL COLOR SHALL NOT BE CONSIDERED ADEQUATE FOR CONSTRUCTION PURPOSES.  
 \*\*WARNING\*\* INFORMATION MAY BE LOST IN COPYING AND/OR GRAY SCALE PLOTTING.

**WEST VIRGINIA CALL BEFORE YOU DIG!**  
 WEST VIRGINIA STATE LAW REQUIRES THAT YOU CALL TWO BUSINESS DAYS BEFORE YOU DIG IN THE STATE OF WEST VIRGINIA. IT'S THE LAW!

**APPROVED WVDEP OOG**  
 10/23/2019

**1211 WELL PAD - ESTIMATED QUANTITIES**

GRAVEL QUANTITIES	ESTIMATED QUANTITIES (PLACED CY)			
	MAIN ACCESS ROAD	AST ACCESS ROAD	AST	TOTAL
8" SOIL CEMENT	3492	218	758	5058
3" CRUSHED SILT	-	1293	284	3575
TOP SOIL CMP & SEAL (PLACED CY)	6507	-	-	7492
COMPOST FILTER SOCK, 18-IN			1,885 LF	
COMPOST FILTER SOCK, 24-IN			2,150 LF	
4" SMARTERCE HD			2,757 LF	
COMPOST FILTER SOCK, 36-IN			0	

- NOTES:
- NATURAL BALANCE FOR ESTIMATED GROSS EARTHWORK QUANTITIES ONLY.
  - TOPSOIL/STRIPPING ESTIMATED VOLUME BASED ON 6" HEIGHTS AVERAGE DEPTH.
  - NATURAL BALANCE AND QUANTITIES BASED ON ESTIMATES AND MAY NOT BE REPRESENTATIVE OF ACTUAL QUANTITIES.
  - ESTIMATES DO NOT REFLECT CONTRACTOR PAY VOLUMES.

RECEIVED  
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**Civil & Environmental Consultants, Inc.**  
 650 Marketplace Ave - Suite 400 - Bridgeport, WV 26330  
 Ph: 304.252.0119 - 855.488.9539 - Fax: 304.934.3337  
 www.civilinc.com

**HG ENERGY II APPALACHIA, LLC**  
**1211 WELL PAD**  
**FREEMANS CREEK DISTRICT**  
**LEWIS COUNTY,**  
**WEST VIRGINIA**

**COVER SHEET**

DATE: JUNE 20TH 2019 BY: AS SHOWN CHECKED BY: [ ]  
 PROJECT NO: 1902-16  
 DRAWING NO: 1902-16-01

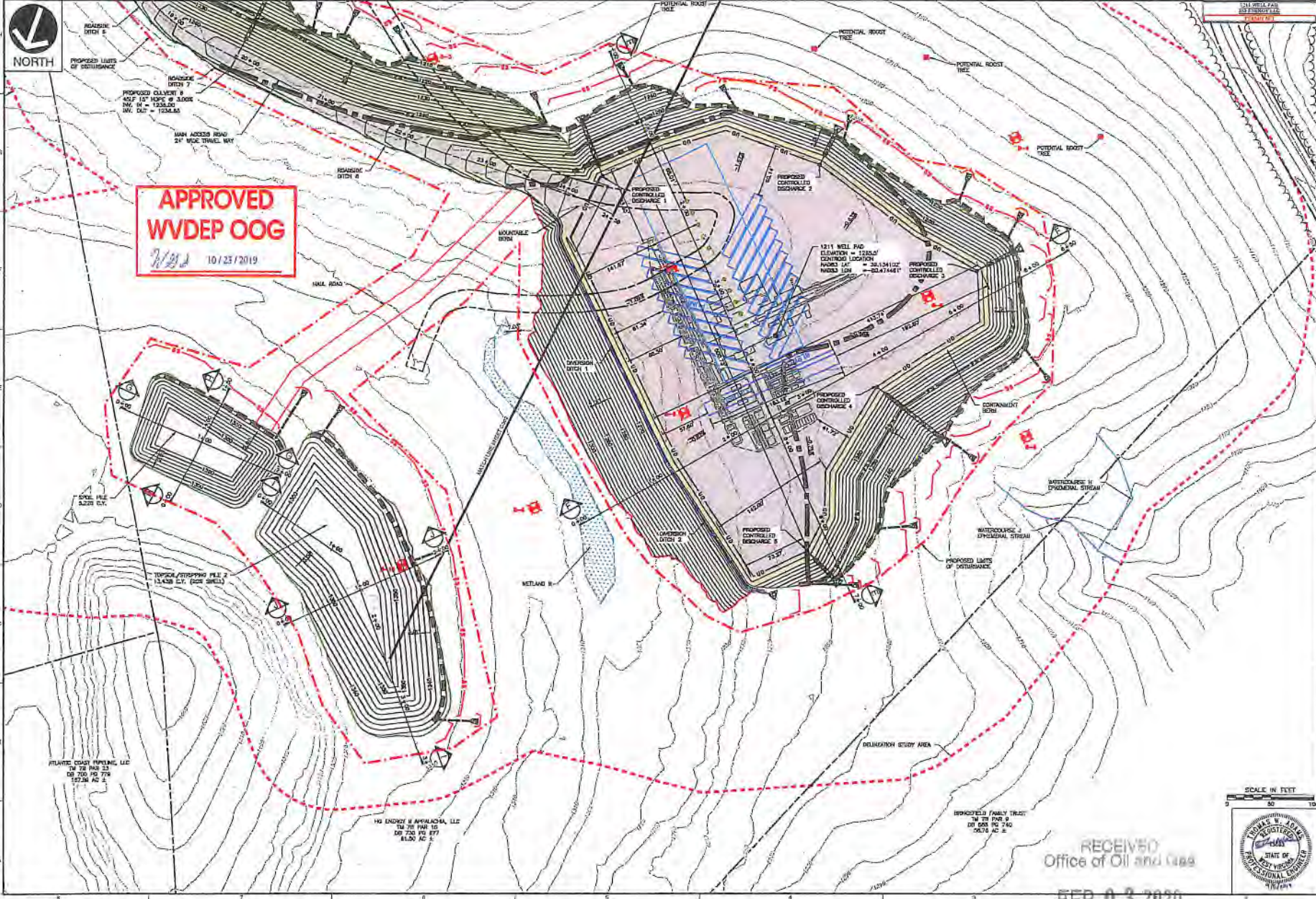
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DESIGNER: [ ]  
 CHECKER: [ ]  
 DATE: [ ]



PROPOSED LIMITS OF DISTURBANCE

APPROVED WVDEP OOG  
10/23/2019



Atlantic Coast Mapping, LLC  
78 7th Floor 211  
601 7th Floor 779  
15728 AC 4

ATLANTIC COAST MAPPING, LLC  
78 7TH FLOOR 211  
601 7TH FLOOR 779  
15728 AC 4

HG ENERGY II APPALACHIA, LLC  
78 7TH FLOOR 115  
601 7TH FLOOR 873  
8150 AC 2

BRIDGEMAN FAMILY TRUST  
78 7TH FLOOR 9  
601 600 TO 740  
0676 AC 2

SCALE IN FEET  
0 50 100



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NO.	DATE	DESCRIPTION
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**CEE**  
Civil & Environmental Consultants, Inc.  
400 Maplelawn Ave - Suite 200 - Bridgeport, WV 26303  
PH: 304.633.3119 • 855.488.2939 • Fax: 304.563.5327  
www.ceecv.com

HG ENERGY II APPALACHIA, LLC  
1211 WELL PAD  
FREEMAN'S CREEK DISTRICT  
LEWIS COUNTY,  
WEST VIRGINIA

SITE LAYOUT  
DATE: JUNE 2019 (ISSUED BY: ELD)  
DRAWN BY: ALS (CHECKED BY: TMS)  
PROJECT NO: 156415  
WV PERMIT NO: 156415

REVISION NO: C303  
SHEET 6 OF 16