



west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Wednesday, August 17, 2022
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for Vaneck 1215 N-4H
47-041-05735-00-00

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: Vaneck 1215 N-4H
Farm Name: HG ENERGY II APPALACHIA
U.S. WELL NUMBER: 47-041-05735-00-00
Horizontal 6A New Drill
Date Issued: 8/17/2022

Promoting a healthy environment.

08/19/2022

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

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

API Number: _____

PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

08/19/2022

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 Camden 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Vaneck 1215 N-4H Well Pad Name: Vaneck 1215

3) Farm Name/Surface Owner: HG Energy II Appalachia, LLC Public Road Access: Mare Run Rd at CR 10 / 9

4) Elevation, current ground: 1259' Elevation, proposed post-construction: 1254.8'

5) Well Type (a) Gas Oil Underground Storage

Other _____

(b) If Gas Shallow Deep

Horizontal

6) Existing Pad: Yes or No Yes

*SPW
6/30/2022*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 6753'/6803' and 50' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6,790'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 19,100'

11) Proposed Horizontal Leg Length: 11,647'

12) Approximate Fresh Water Strata Depths: 60', 214', 600', 861'

13) Method to Determine Fresh Water Depths: Nearest offset well data, (47-041-02173, 0693, 0236, 2308, 0578)

14) Approximate Saltwater Depths: 1605'

15) Approximate Coal Seam Depths: 272', 700', 1040', 1150' (Surface casing is being extended to cover the coal in the DTI Field)

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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Environmental Protection
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08/19/2022

WW-6B
(04/15)

API NO. 47-4704105735
 OPERATOR WELL NO. Vaneck 1215 N-4H
 Well Pad Name: Vaneck 1215

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' ✓	CTS
Fresh Water/Coal	20"	NEW	J-55	94	1200'	1200' ✓	40% Excess, CTS
Intermediate 1	13 3/8"	NEW	J-55 BTC	68	2250'	2250' ✓	40% Excess, CTS
Intermediate 2	9 5/8"	NEW	N-80 BTC	40	4780'	4780' -	40% Excess Tail, CTS
Production	5 1/2"	NEW	P-110 HP	23	19100'	19100' ✓	20% Excess Tail, CTS
Tubing							
Liners							

SPW
-6/30/2022

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	Lead 40% excess, Tail 0% excess
Intermediate 2	9 5/8"	12 1/4"	.395	5750		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 1.20
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 6790'. Drill horizontal leg to estimated 11,647' lateral length, 19,100' 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 ACP 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): 22.55 acres

22) Area to be disturbed for well pad only, less access road (acres): 8.70 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 - Vertical - Run 1 spiral centralizer every 5 joints from the top of the curve to surface, Curve - 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 - 15.6 ppg FNE-1 + 3% bwoc CaCl40% Excess/Yield=1.20 / CTS*
Intermediate 1 - **** Storage String *** CTS **** 15.4 ppg Lead - Yield 1.24 - D896 Surface Set 100 lb / sack (Mix of Class A and Gypsum to meet Dominion Requirements)(B348 - 0.5% BWOB Fluid Loss / D013 - 0.75% BWOB Retarder / D47 - 0.02 gal / sack V8WOB Anti Foam / D202 - 0.15% BWOB Dispersant / D003 1.5 lb per BB- CemNET* - 62% Excess) 15.3 ppg Tail - Yield 1.17 - D896 Surface Set 100 lb / sack (Mix of Class A and Gypsum to meet Dominion Requirements)(B160A - 0.15% BWOB Dispersant / B647 - 0.35% BWOB GasBLOK* / D013 - 0.3% BWOB Retarder / D047 - 0.02 gal / sack Anti Foam / D801 - 0.03 gal / sack Retarder - 0% Excess*
Intermediate 2 - *Lead: 15.4 ppg FNE-1 + 2.5% bwoc CaCl40% Excess / Tail: 15.9 ppg FNE-1 + 2.5% bwoc CaCl 2em0% 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 MPA170Tail: 14.9 ppg FNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA17020% Excess/Lead Yield=1.19 Tail Yield=1.34 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 mud at TD. Circulate a minimum of one hole volume prior to pumping cement.
Production - Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.

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*Note: Attach additional sheets as needed.

HG Energy II Appalachia, LLC
Vaneck 1215 Well Pad (N-1H - N6H, S7H - S12H)
Cement Additives

4704105735

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>14808-60-7</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	14808-60-7			
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Bentonite	Extender	Commonly called gel, it is a clay material used as a cement extender and to control excessive free water.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>bentonite</td> <td>90 - 100</td> <td>1302-78-9</td> </tr> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	bentonite	90 - 100	1302-78-9	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7									
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Calcium Chloride	Accelerator	A powdered, flaked or pelletized material used to decrease thickening time and increase the rate of strength development	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Calcium chloride</td> <td>90 - 100</td> <td>10043-52-4</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Calcium chloride	90 - 100	10043-52-4												
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Cello Flake	Lost Circulation	Graded (3/8 to 3/4 inch) cellophane flakes used as a lost circulation material.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table>	Ingredient name	%	CAS number	No hazardous ingredient														
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FP-13L	Foam Preventer	FP-13L is a clear liquid organic phosphate anti-foaming 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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Sucrose	90 - 100	57-50-1																			
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>Calcium magnesium oxide</td> <td>90 - 100</td> <td>37247-91-9</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Calcium magnesium oxide	90 - 100	37247-91-9												
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MPA-170	Base	A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7	Calcium oxide	1 - 5	1305-78-8									
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R-3	Retarder	A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Organic acid salt</td> <td>40 - 50</td> <td>Trade secret.</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Organic acid salt	40 - 50	Trade secret.												
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S-5	Surfactant	Used to water wet casing and formation to facilitate cement bonding.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>2-Butoxyethanol</td> <td>20 - 30</td> <td>111-76-2</td> </tr> <tr> <td>Proprietary surfactant</td> <td>10 - 20</td> <td>Trade secret.</td> </tr> <tr> <td>D-Glucopyranose, oligomeric, C10-16-alkyl glycosides</td> <td>5 - 10</td> <td>110615-47-9</td> </tr> <tr> <td>Alkylarylsulfonate amine salt</td> <td>1 - 5</td> <td>Trade secret.</td> </tr> <tr> <td>Polyoxyalkylenes</td> <td>0.1 - 1</td> <td>Trade secret.</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	2-Butoxyethanol	20 - 30	111-76-2	Proprietary surfactant	10 - 20	Trade secret.	D-Glucopyranose, oligomeric, C10-16-alkyl glycosides	5 - 10	110615-47-9	Alkylarylsulfonate amine salt	1 - 5	Trade secret.	Polyoxyalkylenes	0.1 - 1	Trade secret.
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*** Storage String *** CTS ***

15.4 ppg Lead - Yield 1.24 - D896 Surface Set 100 lb / sack (Mix of Class A and Gypsum to meet Dominion Requirements)
 B348 - 0.5% BWOB Fluid Loss / D013 - 0.75% BWOB Retarder / D47 - 0.02 gal / sack VBWOB Anti Foam / D202 - 0.15% BWOB
 Dispersant / D095 1.5 lb per BBL CemNET* - 60% Excess
 15.9 ppg Tail - Yield 1.17 - D896 Surface Set 100 lb / sack (Mix of Class A and Gypsum to meet Dominion Requirements)
 B160A - 0.15% BWOB Dispersant / B547 - 0.35% BWOB GasBLOK* / D013 - 0.3% BWOB Retarder / D047 - 0.02 gal / sack Anti Foam /
 D801 - 0.03 gal / sack Retarder - 0% Excess

1215 N-4H
 Marcellus Shale Horizontal
 Lewis County, WV



		1215 N-4H SHL					14205575.26N 1768712.34E								
Ground Elevation	1254.8'					1215 N-4H LP					14206199.23N 1769237.06E				
Azm	340.539°					1215 N-4H BHL					14217176.32N 1765358.17E				

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	214, 800, 851	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	900	905					
			Fresh Water Protection	0	1200					
	17.5"	13-3/8" 66# J-55 BTC	Little Lime	1694	1714	AIR / KCL Salt Polymer	See above (LEFT) for Storage String Cement Blend to Meet DTI Requirements for Gas Storage Field Isolation	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
			Big Lime	1741	1818					
			Injun / Gantz (Storage)	1818 / 2073	1904 / 2125					
			Intermediate 1	0	2375					
	12.25"	9-5/8" 40# N-80 BTC	Thirty Foot	2274	2286	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=5750 psi
			Gordon Stray / Gordon	2320 / 2346	2336 / 2446					
			5th Sand	2590	2612					
			Bayard	2660	2675					
			Speechley	3287	3301					
			Benson	4572	4588					
	8.75"	5-1/2" 23# P-110 HP CDC HTQ				AIR / 9.0ppg SOBM	Lead: 14.5 ppg POZ-PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170 Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess Lead Yield=1.19 Tail Yield=1.94 CTS	Run 1 spiral centralizer every 5 joints from the top of the curve to surface.	Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.416" wall thickness Burst=16240 psi Note: Actual centralizer schedules may be changed due to hole conditions
Rhinestreet			6125	6290						
Cashaqua			6290	6391						
Middlesex			6391	6425						
West River			6425	6500						
Burkelt			6500	6535						
Tully Limestone			6535	6625						
Hamilton			6625	6753						
Marcellus			6753	6803						
Onondaga			6803	6803						
8.5" Curve					11.5ppg-12.5ppg SOBM		Run 1 spiral centralizer every 3 joints from the 1st 5.5" long joint to the top of the curve.			
8.5" Lateral					11.5ppg-12.5ppg SOBM					

LP @ 6789' TVD / 7453' MD

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

+/-11647' ft Lateral

TD @ +/-6789' TVD
 +/-19100' MD

X=centralizers

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 Office of Oil and Gas

JUL 14 2022

WV Department of Environmental Protection
 Production casing = 0.416" wall thickness
 Burst=16240 psi
 Note: Actual centralizer schedules may be changed due to hole conditions

4704105735

WW-9
(4/16)

4704105735

API Number 47 - _____ - _____
Operator's Well No. Vaneck 1215 N-4H

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 Camden 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 _____)

*SDW -
6/30/2022*

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 - SOBMS

-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

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Department of
Environmental Protection

Subscribed and sworn before me this 27th day of June, 2022

Cassidy Boardman Notary Public

My commission expires 7/31/2022



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Cuttings Disposal/Site Water

Cuttings -Haul off Company:

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

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

Environmental Coordination Services & Recycling (ECS&R)
3237 US Highway 19
Cochranston, PA 16314
814-425-7773

Disposal Locations:

Apex Environmental, LLC Permit # 06-08438
11 County Road 78
Amsterdam, OH 43903
740-543-4389

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

Sycamore Landfill Inc. Permit #R90-079001 05-2010
4301 Sycamore Ridge Road
Hurricane, WV 25526
304-562-2611

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

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

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

Waste Management South Hills (Arnoni) Permit # 100592
3100 Hill Road
Library, PA 15129
724-348-7013
412-384-7569

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

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

Brooke County Landfill Permit # SWF-103-87 / WV 0109029
Rd 2 Box 410
Collers, WV 26035
304-748-0014

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Wetzel County Landfill Permit # SWF-1021-97 / WV 0109185
Rt 1 Box 156A
New Martinsville, WV 26035
304-455-3800

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 MID020906814
3947 US 131 North, PO Box 1030
Kalkaska, MI 49646
231-258-9961

Water Haul off Companies:

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

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

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

Nuverra Environmental Solutions
11942 Veterans Memorial Highway
Masontown, WV 26542

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

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

Disposal Locations:

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

Solidification/Incineration
Soil Remediation, Inc. Permit # 02-20753
6065 Arrel-Smith Road
Lowelville, OH 44436
330-536-6825

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

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

Force, Inc.
1380 Rte. 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 15632

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

Nichols 1-A (SWIW #13)
Permit # 3862
300 Cherrington Pkwy, Suite 200
Coraopolis, PA 15108
412-329-7275

Grosella (SWIW #34)
Permit # 4096
Rt. 88
Garrettsville, OH
713-275-4816

Kemble 1-D Well
Permit # 8780
7675 East Pike
Norwich, Oh 43767
614-648-8898
740-796-6495

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

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

Mozena #1 Well (SWIW # 13)
Permit # 34-157-2-5511-00-00
5367 E. State Street
Newcomerstown, OH 43832
740-763-3966

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

SOS D#1 (SWIW #12)
Permit # 34-059-2-4202-00-00
Silcor Oilfield Services, Inc.
2939 Hubbard Road
Youngstown, OH 44505

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

OH UIC #1 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
304-323-6568

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

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

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HG Energy II Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 22.55 Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch Hay 2 Tons/acre

Seed Mixtures

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

Maintain E&S controls through the drilling and completion process

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: S (D) W...

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

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

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Title: WV DEP Oil & Gas Inspector


Date: 6/30/2022

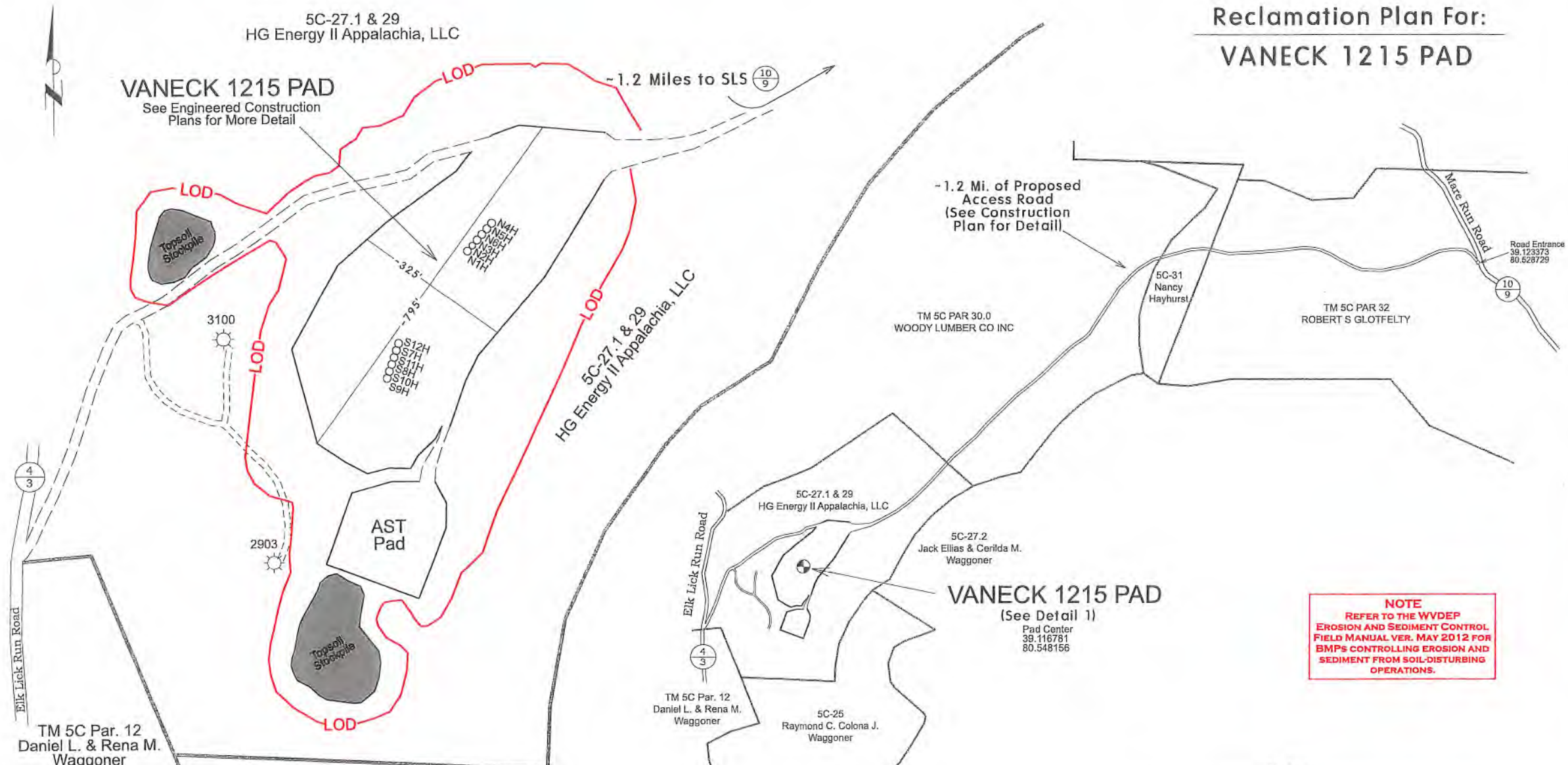
Field Reviewed? Yes No

Reclamation Plan For: VANECK 1215 PAD

5C-27.1 & 29
HG Energy II Appalachia, LLC

VANECK 1215 PAD
See Engineered Construction
Plans for More Detail

- 1.2 Miles to SLS 



- 1.2 Mi. of Proposed
Access Road
(See Construction
Plan for Detail)

TM 5C PAR 30.0
WOODY LUMBER CO INC

TM 5C PAR 32
ROBERT S GLOTFELTY

AST
Pad

5C-27.1 & 29
HG Energy II Appalachia, LLC

VANECK 1215 PAD
(See Detail 1)
Pad Center
39.116781
80.548156

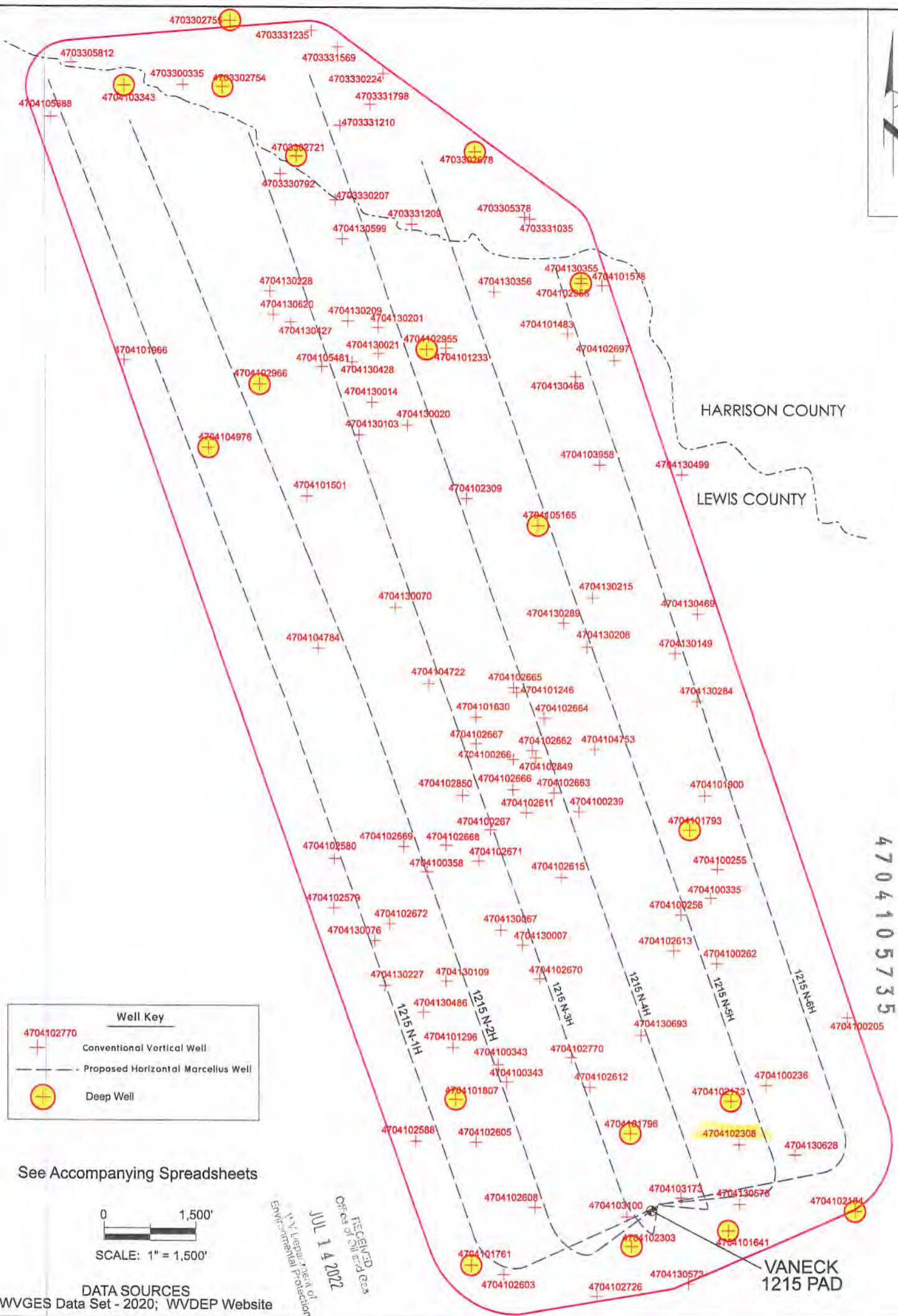
NOTE
REFER TO THE WVDEP
EROSION AND SEDIMENT CONTROL
FIELD MANUAL VER. MAY 2012 FOR
BMPs CONTROLLING EROSION AND
SEDIMENT FROM SOIL-DISTURBING
OPERATIONS.

VANECK 1215 PAD
Detail 1

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Notes:

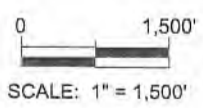
- REQUESTED PERMIT IS FOR DRILLING NEW HORIZONTAL WELLS.
- LOCATION AND ACCESS ROADS WILL BE CONSTRUCTED AS SHOWN ON THE ENGINEERED DRAWINGS WHICH ACCOMPANY THIS PERMIT APPLICATION. REFERENCE IS HEREBY MADE TO THOSE PLANS FOR MORE DETAIL ON E&S MEASURES TO BE TAKEN TO ENSURE COMPLIANCE WITH WVDEP RECLAMATION 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.



Well Key

- 4704102770 + Conventional Vertical Well
- - Proposed Horizontal Marcellus Well
- ⊕ Deep Well

See Accompanying Spreadsheets



DATA SOURCES
WVGES Data Set - 2020; WVDEP Website

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Area of Review for:

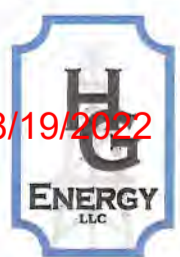
VANECK 1215 NORTH UNIT

- Proposed 1215 N-1H
- Proposed 1215 N-2H
- Proposed 1215 N-3H
- Proposed 1215 N-4H
- Proposed 1215 N-5H
- Proposed 1215 N-6H

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

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

08/19/2022



EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:

VANECK 1215 NORTH UNIT AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H, N-5H & N-6H

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4703300335	Harrison	C A Coffindaffer Hrs	Eastern Gas Transmission & Storage, Inc.	Fifth	Gas w/ Oil Show	3000	PLUGGED	39.166973	-80.574796
2	4703302678	Harrison	K W Coffindaffer	Tenmile Land, LLC	Alexander	House Gas	5550	ABANDONED	39.163980	-80.558063
3	4703302721	Harrison	Robert B Weiman	Tenmile Land, LLC	Alexander	Gas	5081	ACTIVE	39.163785	-80.568309
4	4703302754	Harrison	Robert B Weiman	Tenmile Land, LLC	Alexander	Oil and Gas	5389	ACTIVE	39.166893	-80.572517
5	4703302755	Harrison	Robert B Weiman	Tenmile Land, LLC	Alexander	Oil and Gas	5520	ACTIVE	39.169816	-80.572044
6	4703305378	Harrison	Ray Mosser Jr	Alliance Petroleum Co. LLC	Greenland Gap Fm	Oil and Gas	4010	ACTIVE	39.161053	-80.555241
7	4703305812	Harrison	John E Tyler	Diversified Resources, Inc.	UNKNOWN	not available	-	UNKNOWN	39.167992	-80.581201
8	4703330207	Harrison	Harvey Morris	South Penn Oil Co.	Hampshire Grp	Oil	3021	PLUGGED	39.161822	-80.566082
9	4703330224	Harrison	Luetta Bowen	South Penn Oil (S. Penn Nat. Gas)	Hampshire Grp	Oil and Gas	2707	PLUGGED	39.167494	-80.563286
10	4703330792	Harrison	J B Coffindaffer	Hope Natural Gas Company	Hampshire Grp	Gas	2857	PLUGGED	39.162983	-80.569250
11	4703331035	Harrison	William Moses	Moses, William	Gordon Stray	Oil	2660	PLUGGED	39.160956	-80.555326
12	4703331209	Harrison	Tillman Clemens	Bradford Supply Co.	Gordon	Oil	2592	PLUGGED	39.160742	-80.561692
13	4703331210	Harrison	J B Coffindaffer	Bradford Supply Co.	Gordon Stray	Oil	2775	PLUGGED	39.165157	-80.565792
14	4703331235	Harrison	Minerva Walker	Bradford Supply Co.	Gordon Stray	Gas	2778	PLUGGED	39.169381	-80.567386
15	4703331569	Harrison	Goynor Wise	Moses, William	Gordon Stray	Gas	2778	PLUGGED	39.168655	-80.565895
16	4703331798	Harrison	Burgess Morris	Jackson, Richard C.	UNKNOWN	not available	-	PLUGGED	39.166104	-80.564061
17	4704100013	Lewis	NOTE: THIS WELL IS MAPPED BY SENECA TECHNOLOGIES AND IS SHOWN ON THE PERMIT PLAT BUT NO FIELD EVIDENCE OF IT WAS FOUND AND NO DATA EXISTS FOR IT IN THE WVGES 2020 DATA SET							
17	4704100205	Lewis	Flossie Riley	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	2361	ACTIVE	39.125388	-80.536900
18	4704100236	Lewis	F B Riley	Dominion Energy Transmission, Inc.	Gantz	Storage	2110	ACTIVE	39.122361	-80.541592
19	4704100239	Lewis	George C Francis	Dominion Energy Transmission, Inc.	Gantz	Storage	2322	ACTIVE	39.134608	-80.552219
20	4704100255	Lewis	J T Bailey	Hope Natural Gas Company	Fifth	Storage	2556	PLUGGED	39.132001	-80.544329
21	4704100256	Lewis	J T Bailey	Hope Natural Gas Company	Gordon Stray	Storage	2435	PLUGGED	39.129980	-80.546426
22	4704100262	Lewis	Olive Thoms	Dominion Energy Transmission, Inc.	Thirty-foot	Storage	2370	ACTIVE	39.127821	-80.544402
23	4704100266	Lewis	L E Gall	Hope Natural Gas Company	Gantz	Storage	2346	PLUGGED	39.136913	-80.555985
24	4704100267	Lewis	L E Gall	Dominion Energy Transmission, Inc.	Gantz	Storage	2240	ACTIVE	39.133801	-80.557303
25	4704100335	Lewis	J T Bailey	Hope Natural Gas Company	Up Devonian	Storage	2341	PLUGGED	39.130706	-80.544729
26	4704100343	Lewis	E Haney	Eastern Gas Transmission & Storage, Inc.	Hampshire Grp	Storage	2312	ACTIVE	39.122570	-80.556467
27	4704100358	Lewis	L E Gall	Dominion Energy Transmission, Inc.	Hampshire Grp	Gas	2767	ACTIVE	39.131939	-80.560943
28	4704101233	Lewis	Jacob Freeman Heirs	Diversified Resources, Inc.	Fifth	Oil and Gas	2796	ACTIVE	39.155255	-80.559765
29	4704101246	Lewis	L E Gall	Hope Natural Gas Company	Thirty-foot	Storage	2594	PLUGGED	39.139103	-80.555840
30	4704101296	Lewis	E L Haney	UNKNOWN	Gantz	Storage	2610	PLUGGED	39.124106	-80.569535
31	4704101483	Lewis	D C Burnside	Diversified Resources, Inc.	Squaw	Gas w/ Oil Show	2102	ACTIVE	39.155880	-80.552790
32	4704101501	Lewis	E Freeman	Pioneer Petroleum, Inc.	Squaw	Dry	2100	PLUGGED	39.148652	-80.567749
33	4704101578	Lewis	W A Booth	Diversified Resources, Inc.	Gordon	Gas	2674	ACTIVE	39.158031	-80.550804

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34	4704101630	Lewis	W S Bennett	Dominion Energy Transmission, Inc.	Gantz	Storage	2368	PLUGGED	39.138805	-80.558116
35	4704101641	Lewis	Jack E Waggoner	Eastern Gas Transmission & Storage, Inc.	Greenland Gap Fm	Gas	4703	ACTIVE	39.115940	-80.543808
36	4704101761	Lewis	William Burnside	Eastern Gas Transmission & Storage, Inc.	Benson	Gas	4760	ACTIVE	39.114437	-80.558558
37	4704101793	Lewis	Burnside & Freeman	Stephen Gas Company	Benson	Gas w/ Oil Show	4705	ACTIVE	39.133754	-80.545894
38	4704101796	Lewis	David A Caynor	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4755	ACTIVE	39.120257	-80.549412
39	4704101807	Lewis	E L Hanley	Eastern Gas Transmission & Storage, Inc.	Benson	Storage	4876	ACTIVE	39.121790	-80.559398
40	4704101900	Lewis	Burnside & Freeman	Stephen Gas Company	Big Injun (Grnbr)	Oil and Gas	1988	ACTIVE	39.135288	-80.545022
41	4704101966	Lewis	Brent Maxwell	Eastern Gas Transmission & Storage, Inc.	Gordon	Dry	2896	PLUGGED	39.154711	-80.578247
42	4704102173	Lewis	Woody Lumber Co Inc	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4746	ACTIVE	39.121674	-80.543631
43	4704102184	Lewis	M C Burnside	Eastern Gas Transmission & Storage, Inc.	Benson	Gas	4848	ACTIVE	39.116787	-80.536540
44	4704102303	Lewis	Orpha D Waggoner	Eastern Gas Transmission & Storage, Inc.	Benson	Oil and Gas	4777	ACTIVE	39.115272	-80.549369
45	4704102308	Lewis	F Riley	Eastern Gas Transmission & Storage, Inc.	Gordon	Gas	2393	ACTIVE	39.119756	-80.543167
46	4704102309	Lewis	J S Burnside	Dominion Energy Transmission, Inc.	not available	Gas	2591	PLUGGED	39.148560	-80.558603
47	4704102579	Lewis	Sarepta Nutter	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.130324	-80.566303
48	4704102580	Lewis	J R H Straley	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.132532	-80.566249
49	4704102588	Lewis	Minor J Hall	Eastern Gas Transmission & Storage, Inc.	Hampshire Grp	Storage	2350	ACTIVE	39.119939	-80.561694
50	4704102603	Lewis	W Burnside	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.114018	-80.556711
51	4704102605	Lewis	T J Halterman	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.119907	-80.558232
52	4704102608	Lewis	G W Waggoner	Eastern Gas Transmission & Storage, Inc.	Hampshire Grp	Storage	2296	ACTIVE	39.117018	-80.554880
53	4704102611	Lewis	George C Francis	Dominion Energy Transmission, Inc.	not available	Storage	2350	ACTIVE	39.134567	-80.555238
54	4704102612	Lewis	S Minter Heirs	Dominion Energy Transmission, Inc.	not available	Storage	2273	ACTIVE	39.122318	-80.551705
55	4704102613	Lewis	Caroline Minter	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	2622	ACTIVE	39.128385	-80.546842
56	4704102615	Lewis	Geo C Francis	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.131662	-80.553225
57	4704102662	Lewis	Francis M McKinley	Hope Natural Gas Company	not available	not available	-	ABANDONED	39.137318	-80.554891
58	4704102663	Lewis	Francis M McKinley	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.135429	-80.552660
59	4704102664	Lewis	Francis M McKinley	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.138748	-80.554200
60	4704102665	Lewis	W S Bennett	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.140146	-80.555951
61	4704102666	Lewis	Norman S Small	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	2673	ACTIVE	39.135584	-80.556008
62	4704102667	Lewis	L E Gall	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.137633	-80.558097
63	4704102668	Lewis	L E Gall	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.133096	-80.559857
64	4704102669	Lewis	L E Gall	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.133045	-80.562280
65	4704102670	Lewis	B J & B E Rhoades	Dominion Energy Transmission, Inc.	Hampshire Grp	Observation	2141	ACTIVE	39.127182	-80.554537
66	4704102671	Lewis	L E Gall	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.132416	-80.557967
67	4704102672	Lewis	L E Gall	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.129634	-80.563098
68	4704102697	Lewis	J A Fox	Fluharty Enterprises, Inc.	UNKNOWN	not available	-	XABANDONED	39.154720	-80.550106
69	4704102726	Lewis	E W Waggoner	UNKNOWN	Hampshire Grp	Gas	2435	PLUGGED	39.113030	-80.551358
70	4704102770	Lewis	Sheldon Minter	Dominion Energy Transmission, Inc.	undetermined unit	Storage	2232	ACTIVE	39.123651	-80.552733

4704105735

71	4704102849	Lewis	Francis McKinley	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.136989	-80.554712
72	4704102850	Lewis	L E Gall et al	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.135934	-80.558905
73	4704102955	Lewis	Zella Curry	Alliance Petroleum Co. LLC	Alexander	Gas	5353	ACTIVE	39.155188	-80.560862
74	4704102956	Lewis	James E Elmer	Diversified Resources, Inc.	Alexander	Oil and Gas	5431	ABANDONED	39.158129	-80.552007
75	4704102966	Lewis	Ralph Pitzer	Alliance Petroleum Co. LLC	Greenland Gap Fm	Oil and Gas	5535	ACTIVE	39.153631	-80.570456
76	4704103100	Lewis	Marjorie Hyatt	Dominion Energy Transmission, Inc.	Big Injun (Grnbr)	Oil w/ Gas Show	2075	ACTIVE	39.116597	-80.549618
77	4704103173	Lewis	Orpha Waggoner	Consolidated Gas Supply Corp.	Big Injun (Grnbr)	Dry	2089	PLUGGED	39.117125	-80.546893
78	4704103343	Lewis	R B Weimann	Diversified Resources, Inc.	Benson	Oil and Gas	5058	ACTIVE	39.166953	-80.578187
79	4704103958	Lewis	James W Wagner et al	Diversified Resources, Inc.	Greenland Gap Fm	Gas	3131	ACTIVE	39.150039	-80.550957
80	4704104722	Lewis	W S Bennett	Dominion Energy Transmission, Inc.	Fifth	Gas	2752	PLUGGED	39.140307	-80.560812
81	4704104753	Lewis	Allegheny Wood Products	Dominion Energy Transmission, Inc.	not available	not available	-	PLUGGED	39.137362	-80.551309
82	4704104784	Lewis	Troy/D Rickles	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	-	PLUGGED	39.141896	-80.567142
83	4704104976	Lewis	Phillip Burnside	Mountain V Oil and Gas, Inc.	Alexander	Gas	5600	ACTIVE	39.150796	-80.573408
84	4704105165	Lewis	J Todd Hatfield	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4910	ACTIVE	39.147356	-80.554526
85	4704105481	Lewis	Jerry Tomes	Diversified Resources, Inc.	Hampshire Grp	Oil and Gas	3300	ACTIVE	39.154425	-80.566885
86	4704105688	Lewis	John E Tyler	Diversified Resources, Inc.	-	-	-	NEVER DRILLED	39.165574	-80.582408
87	4704130007	Lewis	L E Gall	Hope Construction & Refining	not available	not available	-	PLUGGED	39.128685	-80.555511
88	4704130014	Lewis	Stella Freeman Hrs	South Penn Oil Co.	Gordon Stray	Oil	2778	PLUGGED	39.152835	-80.564021
89	4704130020	Lewis	S M Burnside	South Penn Oil Co.	Greenland Gap Fm	Oil and Gas	3675	PLUGGED	39.151820	-80.561972
90	4704130021	Lewis	J L Freeman	Hope Natural Gas Company	Hampshire Grp	Oil and Gas	3038	PLUGGED	39.155010	-80.563649
91	4704130067	Lewis	LO Stutler	Pittsburgh & WV Gas	Gordon	Oil and Gas	2411	PLUGGED	39.129342	-80.556751
92	4704130070	Lewis	William Furley	Pittsburgh & WV Gas	Hampshire Grp	Gas	2760	PLUGGED	39.143699	-80.562714
93	4704130076	Lewis	Ray & Delphia Holden	South Penn Oil (S. Penn Nat. Gas)	Hampshire Grp	Oil	2869	PLUGGED	39.128893	-80.563980
94	4704130103	Lewis	Earl Freeman	South Penn Oil Co.	Hampshire Grp	Oil	2782	PLUGGED	39.151384	-80.564765
95	4704130109	Lewis	F M McKinley	Federal Oil Co.	UNKNOWN	not available	2909	PLUGGED	39.127081	-80.559901
96	4704130149	Lewis	F M McKinley	Douglas, Septer W.	not available	not available	-	PLUGGED	39.141669	-80.546698
97	4704130201	Lewis	J L Freeman	UNKNOWN	not available	not available	-	PLUGGED	39.156170	-80.563649
98	4704130208	Lewis	Enn Bailey	Atha Supply Company	not available	not available	-	PLUGGED	39.141959	-80.551726
99	4704130209	Lewis	Jacob L Freeman Bros	South Penn Oil Co.	Gordon Stray	Oil and Gas	2580	PLUGGED	39.156460	-80.565381
100	4704130215	Lewis	Lelia Grace	South Penn Oil Co.	Hampshire Grp	Oil	2846	PLUGGED	39.144134	-80.551402
101	4704130227	Lewis	Ray & Delphia Holden	South Penn Oil (S. Penn Nat. Gas)	Hampshire Grp	Oil and Gas	2932	PLUGGED	39.126897	-80.563418
102	4704130228	Lewis	Chas A Coffindaffer	South Penn Oil Co.	Gordon	Oil	2736	PLUGGED	39.157765	-80.569853
103	4704130284	Lewis	Francis M McKinley	Hope Natural Gas Company	Hampshire Grp	Oil and Gas	2821	PLUGGED	39.139493	-80.545440
104	4704130289	Lewis	John S Burnside	Hope Natural Gas Company	Hampshire Grp	Oil and Gas	2818	PLUGGED	39.143008	-80.553062
105	4704130355	Lewis	William Moses	Moses, William	Fifth	Oil	2806	PLUGGED	39.158346	-80.551972
106	4704130356	Lewis	William Moses	Moses, William	Gordon Stray	Oil	2805	PLUGGED	39.157765	-80.557000
107	4704130427	Lewis	Mrs Alona May Lowman	Bradford Supply Co.	Gordon Stray	Gas	2702	PLUGGED	39.156412	-80.568647

108	4704130428	Lewis	Mrs Alona May Lowman	Bradford Supply Co.	Gordon Stray	Oil	2594	PLUGGED	39.154630	-80.565145
109	4704130468	Lewis	J A Fox	Bradford Supply Co.	Hampshire Grp	Gas	2850	PLUGGED	39.153995	-80.552341
110	4704130469	Lewis	Alice White	Bradford Supply Co.	Hampshire Grp	Oil	2850	PLUGGED	39.143409	-80.545395
111	4704130486	Lewis	Serepta Nutter	South Penn Oil (S. Penn Nat. Gas)	Hampshire Grp	Oil	2914	PLUGGED	39.125691	-80.561211
112	4704130499	Lewis	J A Fox	South Penn Oil Co.	Hampshire Grp	Oil	2793	PLUGGED	39.149595	-80.546272
113	4704130578	Lewis	Fortunatus White	Hope Natural Gas Company	Hampshire Grp	Gas	2602	PLUGGED	39.117115	-80.543159
114	4704130599	Lewis	U A Morris	Bradford Supply Co.	Gordon Stray	Oil	2707	PLUGGED	39.160086	-80.565700
115	4704130620	Lewis	J L Freeman	Hal Pack & Company	Hampshire Grp	Oil	2619	PLUGGED	39.156750	-80.569666
116	4704130628	Lewis	Fortunatus White	Hope Natural Gas Company	not available	not available	2702	not available	39.119287	-80.539976
117	4704130693	Lewis	Shelton Minter Hrs	Hope Natural Gas Company	Hampshire Grp	Gas	2594	PLUGGED	39.124656	-80.548745

SOURCE: WVGES DATASET (2020) and WVDEP WEBSITE AND FIELD SURVEYS

YELLOW DENOTES WELL WITH TVD > 4,500'

DENOTES SURVEYED WELL COORDINATES

UPDATED 6/22/2022

4704105735

HG Energy II Appalachia, LLC

Site Safety Plan

**Vaneck 1215 Well Pad
1451 Mare Run Road, Weston
Lewis County, WV 26452**

January 2022: Version 1

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

HG Energy II Appalachia, LLC

5260 Dupont Road

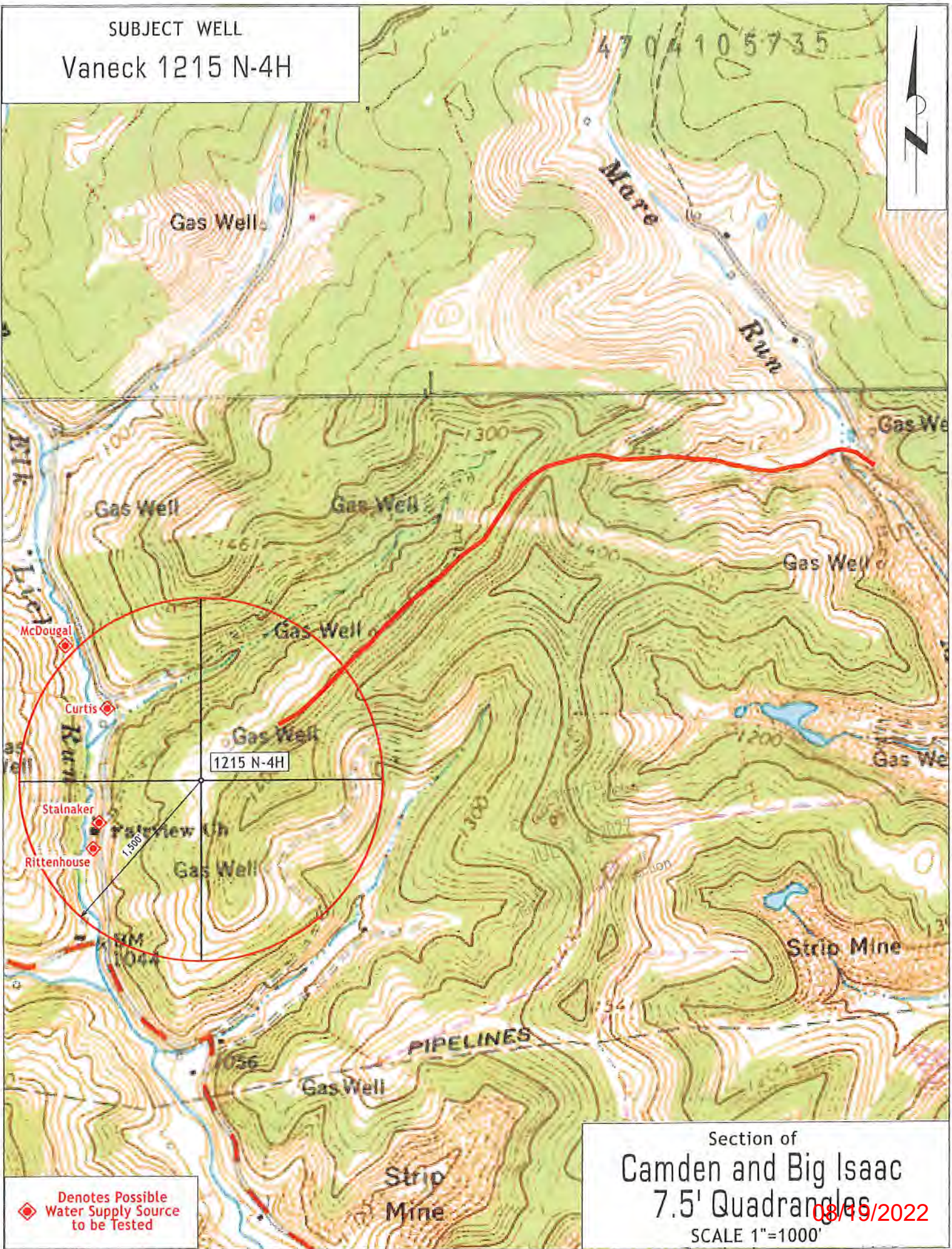
Parkersburg, WV 26101

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JUL 14 2022
WV Department of
Environmental Protection

*SPW
6/30/2022*

08/19/2022

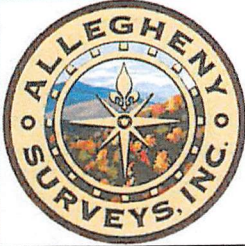
SUBJECT WELL
Vaneck 1215 N-4H



◆ Denotes Possible Water Supply Source to be Tested

Section of
Camden and Big Isaac
7.5' Quadrangles
08/19/2022
SCALE 1"=1000'

HG Energy II Appalachia, LLC
Well No. Vaneck 1215 N-4H



Page 1 of 3

Notes:
Well No. Vaneck 1215 N-4H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,205,575.26'
E: 1,768,712.34'
Landing Point Coordinates
N: 14,206,199.23'
E: 1,769,237.06'
Bottom Hole Coordinates
N: 14,217,176.32'
E: 1,765,358.17'



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.

Kevin S. James

Kevin S. James, P.S. 2305

Notes: Well No. Vaneck 1215 N-4H
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Top Hole coordinates Bottom Hole coordinates
Latitude: 39°07'01.21" Latitude: 39°08'56.08"
Longitude: 80°32'52.23" Longitude: 80°33'34.08"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,329,868.000m N: 4,333,404.009m
E: 539,104.600m E: 538,082.246m
Plat orientation and corner and well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.

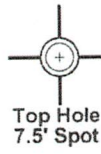
GRID NORTH

5,046' to Bottom Hole

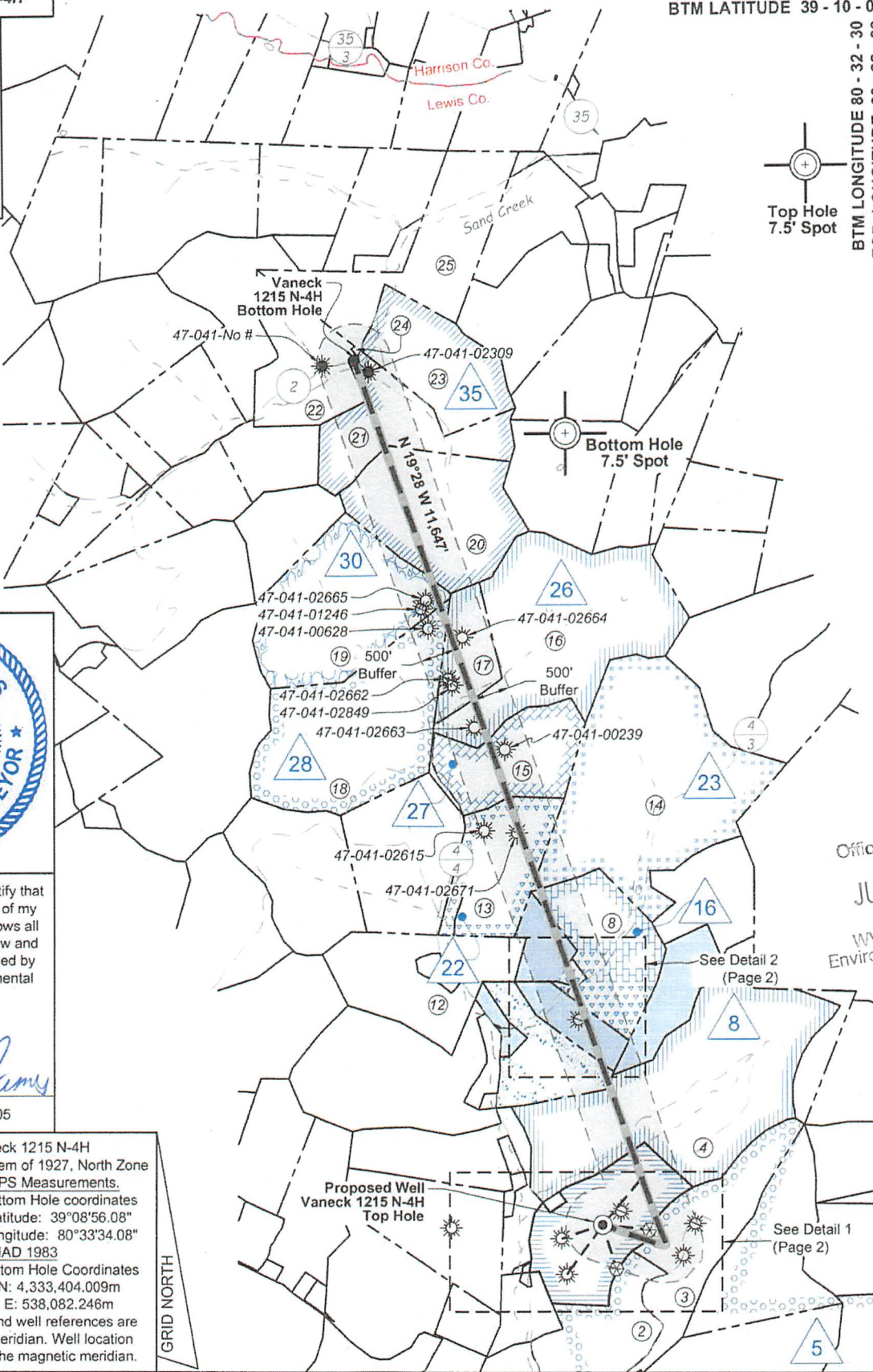
1,751' to Top Hole

TOP LATITUDE 39 - 07 - 30
BTM LATITUDE 39 - 10 - 00

BTM LONGITUDE 80 - 32 - 30
TOP LONGITUDE 80 - 32 - 30



2,912' to Top Hole
6,466' to Bottom Hole



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WV Department of Environmental Protection

See Detail 2 (Page 2)

See Detail 1 (Page 2)

FILE NO: 156-36-UFC-20
DRAWING NO: Vaneck 1215 N-4H 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: June 24 2022
OPERATOR'S WELL NO. Vaneck 1215 N-4H
API WELL NO
47 - 041 - 05735
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1254.8' WATERSHED: Middle West Fork Creek
DISTRICT: Freemans Creek
SURFACE OWNER: HG Energy II, Appalachia, LLC, et al
ROYALTY OWNER: George W. Waggoner, et ux, et al LEASE NO: ACREAGE: 56.00
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: 19,100' MD 6,790' TVD

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

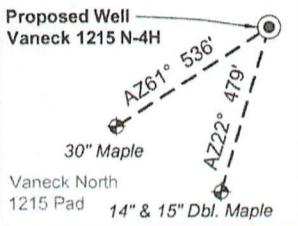
08/19/2022

HG Energy II Appalachia, LLC
Well No. Vaneck 1215 N-4H

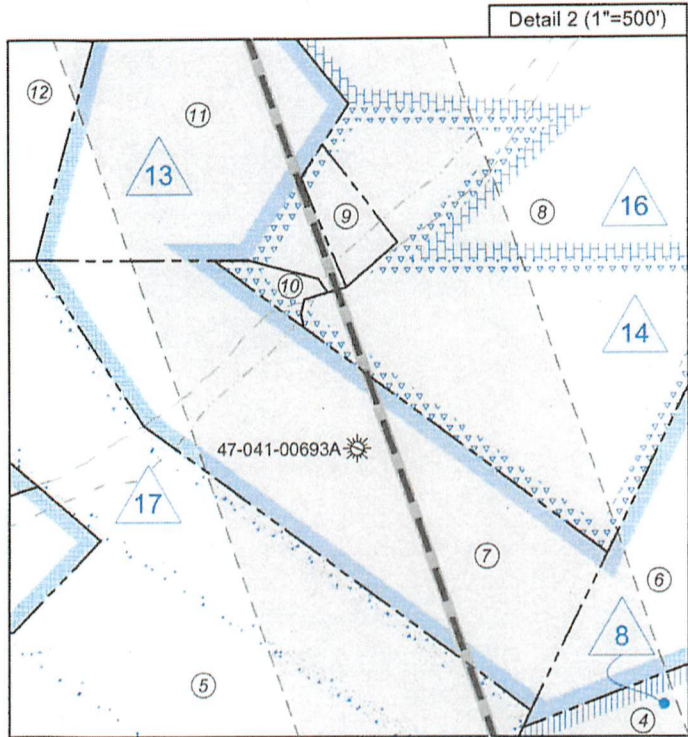


Page 2 of 3

Well Location References
Not to Scale

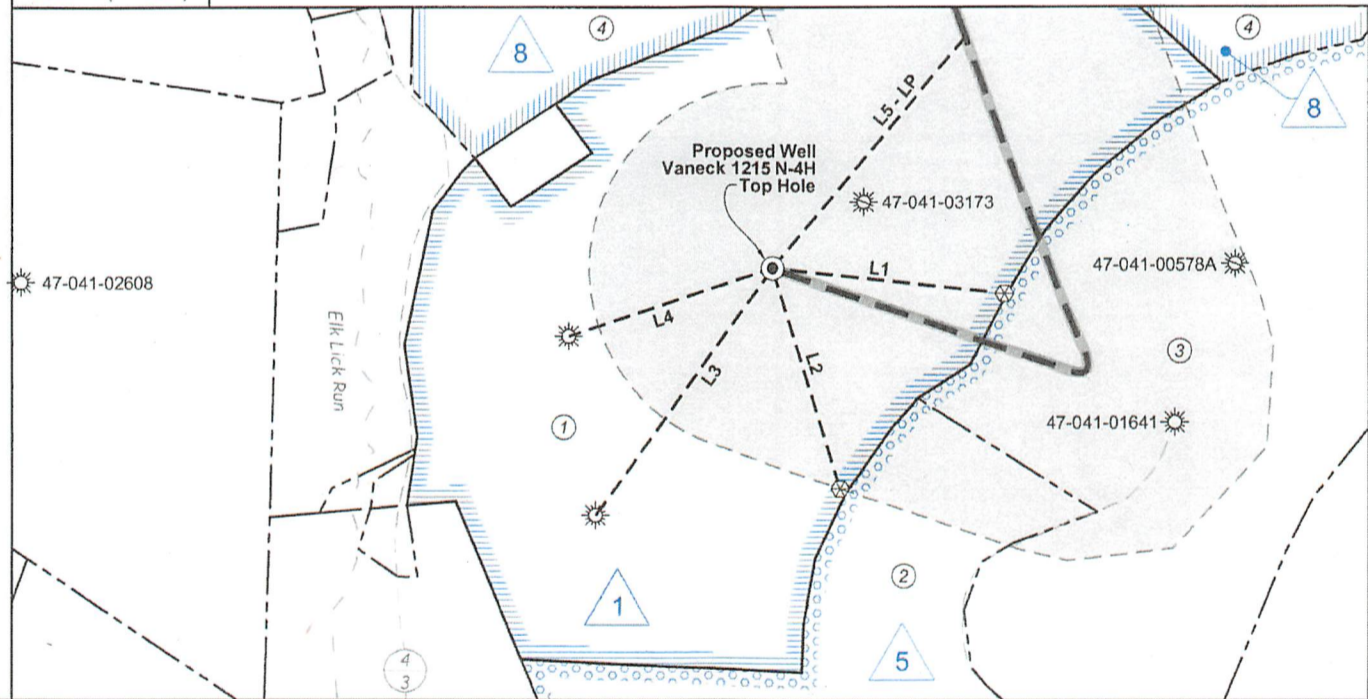


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JUL 14 2022
WV Department of
Environmental Protection



Tag	Bearing	Dist.	Description
L1	N 83°50' W	634.6'	1/2" Rebar
L2	N 17°13' W	620.2'	1/2" Rebar
L3	N 35°58' E	821.6'	#47-041-02303
L4	N 71°45' E	584.5'	#47-041-03100
L5	N 40°04' E	815.3'	Landing point

Detail 1 (1"=500')



FILE NO: 156-36-UFC-20
DRAWING NO: Vaneck 1215 N-4H 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: June 24 2022
OPERATOR'S WELL NO. Vaneck 1215 N-4H
API WELL NO
47 - 041 - 05735
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1254.8' WATERSHED: Middle West Fork Creek
DISTRICT: Freemans Creek

Top - Camden
QUADRANGLE: Btm - Big Isaac
COUNTY: Lewis

SURFACE OWNER: HG Energy II, Appalachia, LLC, et al
ROYALTY OWNER: George W. Waggoner, et ux, et al

ACREAGE: 55.00

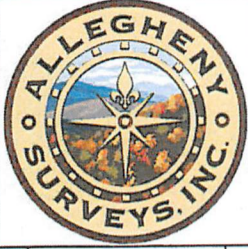
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)

PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,100' MD 6,790' 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

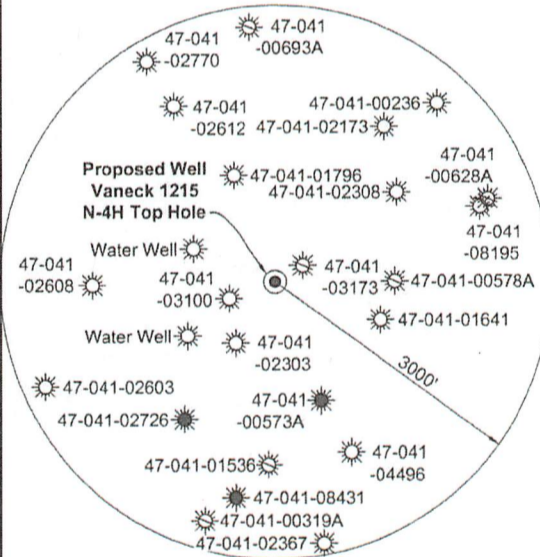
08/19/2022



ID	Lease
1	George W. Waggoner, et ux
5	F. White
8	Fielding B. Riley, et al
13	South Penn Natural Gas Co., et al
14	W.W. Minter, et al
16	Caroline Minter
17	Jacob Minter, et ux
22	Geo C. Francis, et al
23	George I. Davisson, et al
26	Francis M. McKinley, et ux
27	C. Francis, et al
28	L.E. Gall, et al
30	W.S. Bennett, et ux
35	J.S. Burnside, et ux

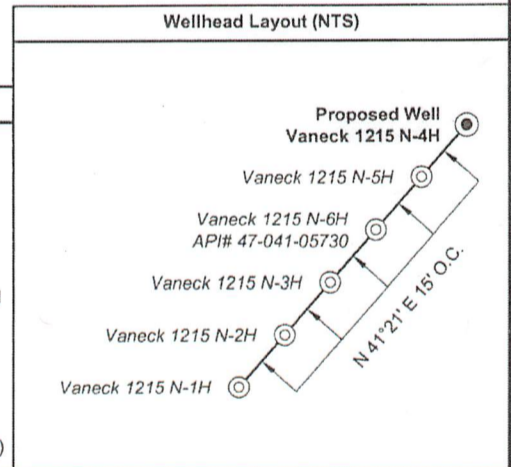
RECEIVED
Office of Oil and Gas
JUL 14 2022
WV Department of
Environmental Protection

Lewis Co. - Freeman Creek Dist.				
No.	TM / Par	Owner	Bk / Pg	Ac.
1	5C / 29	HG Energy II Appalachia, LLC	765 / 894	55.00
2	5C / 25	Raymond C. & Colona J. Waggoner	567 / 416	45.48
3	5C / 27.2	Jack E. & Cerilda M. Waggoner	547 / 691	57.97
4	5C / 30	Woody Lumber Co. Inc.	590 / 438	140.50
5	5C / 3	Betty E. Rhoades	W35 / 524	33.60
6	5C / 55	Debra Burnside Garrett, et al	WB R / 525	25.00
7	5C / 52	Debra Burnside Garrett, et al	WB R / 525	16.50
8	5B / 15	Edward E. Garrett, et al	429 / 245	53.40
9	5C / 50	Edward E. Garrett, et al	429 / 245	1.00
10	5C / 1	Betty E. Rhoades	W35 / 524	0.50
11	5B / 42	Bruce Garrett, et al	PB 2 / 155	14.10
12	5B / 11	Betty E. Rhoades	W35 / 524	56.00
13	5B / 22	Christopher G. Duerr	594 / 666	34.50
14	5B / 21	Theodore J. & Jacqueline Riley	467 / 254	140.00
15	5B / 23	Christopher G. Duerr	594 / 666	40.00
16	5B / 25.1	Jeffrey P. & Anessa E. Griffith	745 / 338	118.29
17	5B / 25	Misty L. & Gerald Kolva, II	722 / 849	25.27
18	5B / 5	Gerald L. & Rita R. Kolva	639 / 517	100.33
19	5B / 4	Coastal Forest Resources Co.	710 / 471	85.00
20	5B / 3	Jeffrey P. & Anessa E. Griffith	653 / 168	74.00
21	5B / 1	Jeffrey P. & Anessa E. Griffith	692 / 498	49.25
22	5A / 4	Jeffrey P. & Anessa E. Griffith	692 / 498	44.00
23	5A / 5	Jeffrey P. & Anessa E. Griffith	653 / 165	51.25
24	5A / 3	Howard Walker, III	576 / 473	0.19
25	5A / 6	Jeffrey P. & Anessa E. Griffith	692 / 498	78.00



Note: 2 water well was found within 1500' 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
	Creek or Drain
	Existing Road
	Surface boundary (approx.)
	Adjoiner surface tracts (approx.)



FILE NO: 156-36-UFC-20
DRAWING NO: Vaneck 1215 N-4H 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: June 24 2022
OPERATOR'S WELL NO. Vaneck 1215 N-4H
API WELL NO
47 - 041 - 05735
STATE COUNTY PERMIT

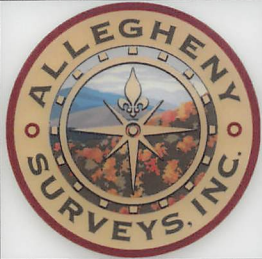
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(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

LOCATION: ELEVATION: 1254.8' WATERSHED: Middle West Fork Creek
DISTRICT: Freemans Creek
SURFACE OWNER: HG Energy II, Appalachia, LLC, et al
ROYALTY OWNER: George W. Waggoner, et ux, et al LEASE NO: _____ ACREAGE: 56.00
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ 6,790' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,100' 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

08/19/2022

HG Energy II Appalachia, LLC
Well No. Vaneck 1215 N-4H



Page 1 of 3

Notes:
Well No. Vaneck 1215 N-4H
UTM NAD 1983 (USSF)
Top Hole Coordinates
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Kevin S. James
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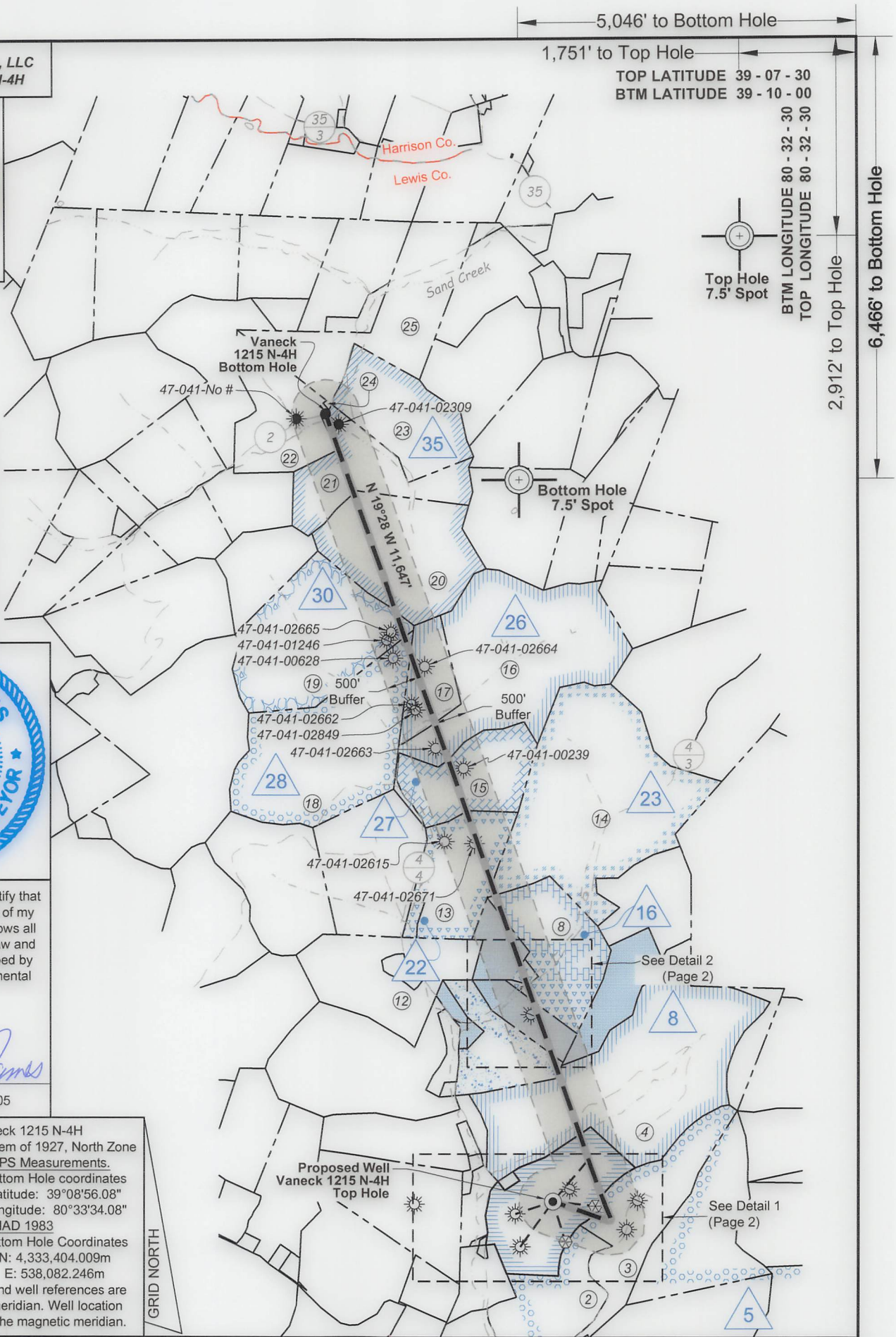
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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

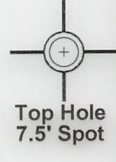
DATE: June 24 2022
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API WELL NO
47 - 041 - 05735
STATE COUNTY PERMIT

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Parkersburg, WV 26101 Parkersburg, WV 26101



5,046' to Bottom Hole
1,751' to Top Hole
TOP LATITUDE 39 - 07 - 30
BTM LATITUDE 39 - 10 - 00
BTM LONGITUDE 80 - 32 - 30
TOP LONGITUDE 80 - 32 - 30
Top Hole 7.5' Spot
2,912' to Top Hole
6,466' to Bottom Hole



GRID NORTH

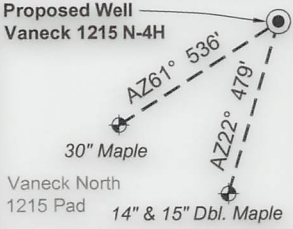
See Detail 2 (Page 2)

See Detail 1 (Page 2)

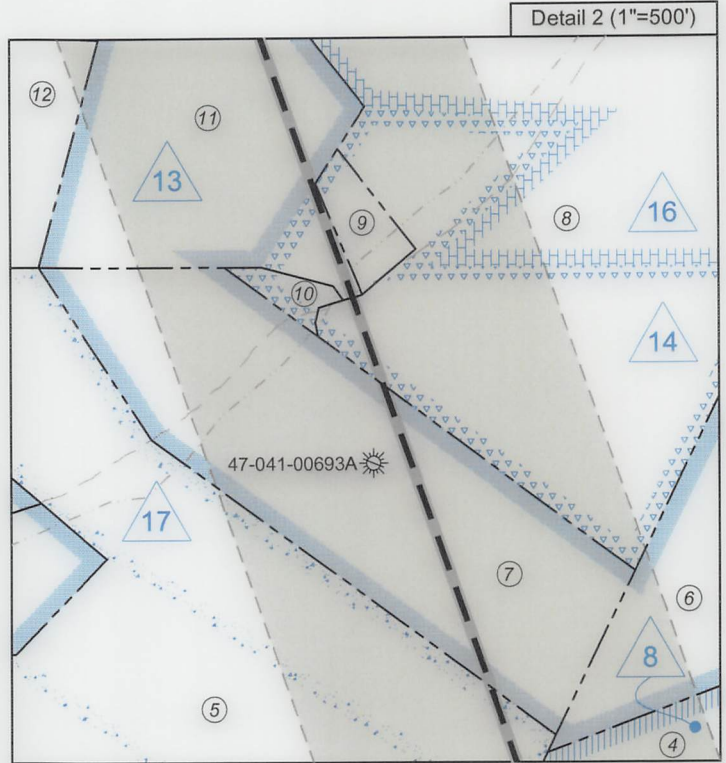
08/19/2022



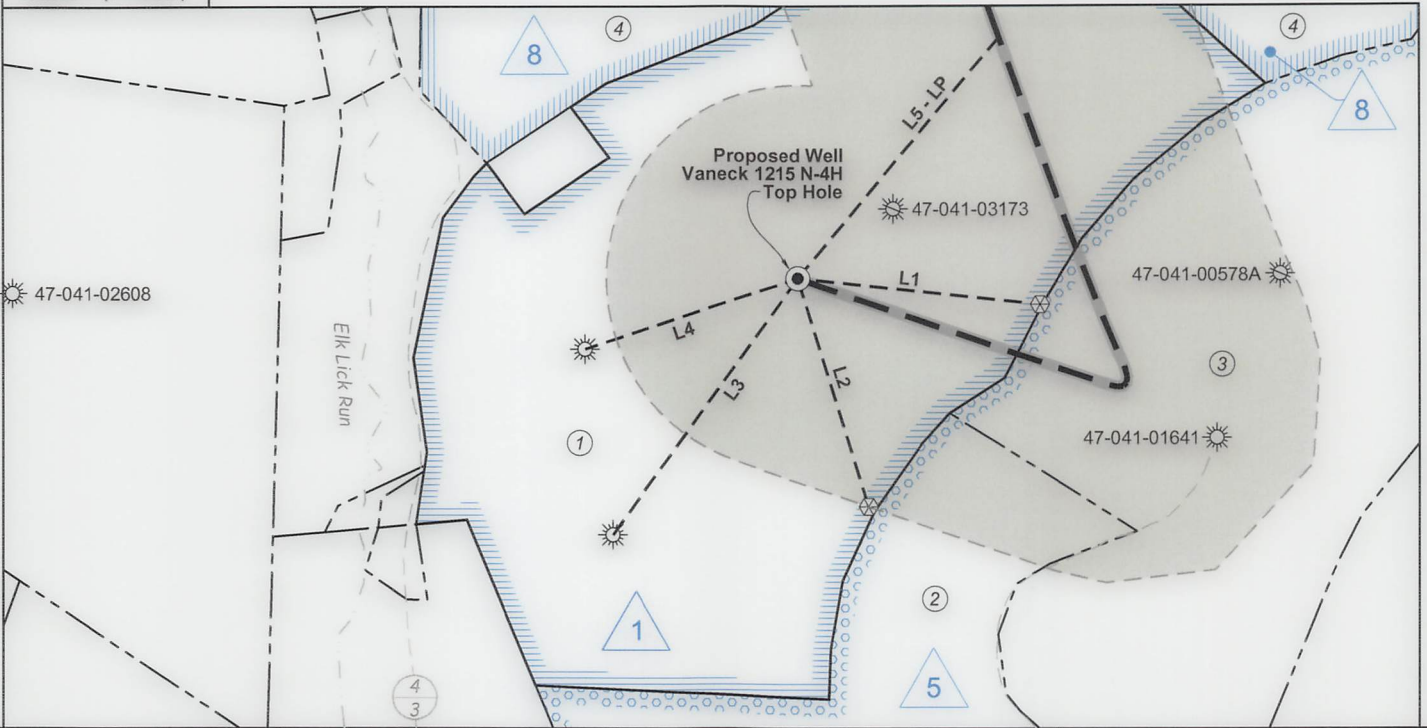
Well Location References
Not to Scale



Tag	Bearing	Dist.	Description
L1	N 83°50' W	634.6'	1/2" Rebar
L2	N 17°13' W	620.2'	1/2" Rebar
L3	N 35°58' E	821.6'	#47-041-02303
L4	N 71°45' E	584.5'	#47-041-03100
L5	N 40°04' E	815.3'	Landing point



Detail 1 (1"=500')



FILE NO: 156-36-UFC-20
DRAWING NO: Vaneck 1215 N-4H 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: June 24 2022
OPERATOR'S WELL NO. Vaneck 1215 N-4H
API WELL NO
47 - 041 - 05735
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1254.8' WATERSHED: Middle West Fork Creek
DISTRICT: Freemans Creek

QUADRANGLE: Top - Camden
Btm - Big Isaac
COUNTY: LEWIS
ACREAGE: 55.00

SURFACE OWNER: HG Energy II, Appalachia, LLC, et al
ROYALTY OWNER: George W. Waggoner, et ux, et al

LEASE NO: _____ ACREAGE: 56.00

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: 6,790' TVD
19,100' MD

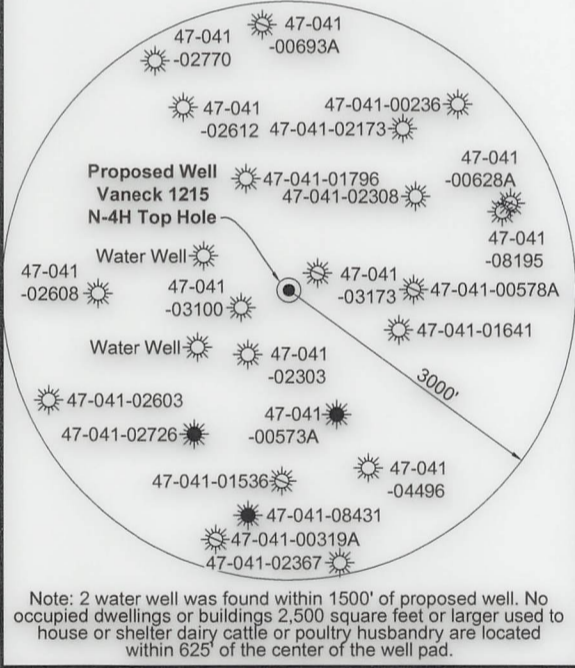
WELL OPERATOR: HG Energy II Appalachia, LLC
ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101

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

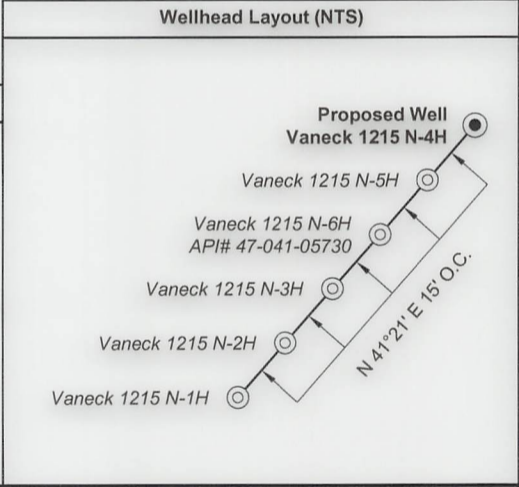


ID	Lease
1	George W. Waggoner, et ux
5	F. White
8	Fielding B. Riley, et al
13	South Penn Natural Gas Co., et al
14	W.W. Minter, et al
16	Caroline Minter
17	Jacob Minter, et ux
22	Geo C. Francis, et al
23	George I. Davisson, et al
26	Francis M. McKinley, et ux
27	C. Francis, et al
28	L.E. Gall, et al
30	W.S. Bennett, et ux
35	J.S. Burnside, et ux

Lewis Co. - Freeman Creek Dist.				
No.	TM / Par	Owner	Bk / Pg	Ac.
1	5C / 29	HG Energy II Appalachia, LLC	765 / 894	55.00
2	5C / 25	Raymond C. & Colona J. Waggoner	567 / 416	45.48
3	5C / 27.2	Jack E. & Cerilda M. Waggoner	547 / 691	57.97
4	5C / 30	Woody Lumber Co. Inc.	590 / 438	140.50
5	5C / 3	Betty E. Rhoades	W35 / 524	33.60
6	5C / 55	Debora Burnside Garrett, et al	WB R / 525	25.00
7	5C / 52	Debora Burnside Garrett, et al	WB R / 525	16.50
8	5B / 15	Edward E. Garrett, et al	429 / 245	53.40
9	5C / 50	Edward E. Garrett, et al	429 / 245	1.00
10	5C / 1	Betty E. Rhoades	W35 / 524	0.50
11	5B / 42	Bruce Garrett, et al	PB 2 / 155	14.10
12	5B / 11	Betty E. Rhoades	W35 / 524	56.00
13	5B / 22	Christopher G. Duerr	594 / 666	34.50
14	5B / 21	Theodore J. & Jacqueline Riley	467 / 254	140.00
15	5B / 23	Christopher G. Duerr	594 / 666	40.00
16	5B / 25.1	Jeffrey P. & Anessa E. Griffith	745 / 338	118.29
17	5B / 25	Misty L. & Gerald Kolva, II	722 / 849	25.27
18	5B / 5	Gerald L. & Rita R. Kolva	639 / 517	100.33
19	5B / 4	Coastal Forest Resources Co.	710 / 471	85.00
20	5B / 3	Jeffrey P. & Anessa E. Griffith	653 / 168	74.00
21	5B / 1	Jeffrey P. & Anessa E. Griffith	692 / 498	49.25
22	5A / 4	Jeffrey P. & Anessa E. Griffith	692 / 498	44.00
23	5A / 5	Jeffrey P. & Anessa E. Griffith	653 / 165	51.25
24	5A / 3	Howard Walker, III	576 / 473	0.19
25	5A / 6	Jeffrey P. & Anessa E. Griffith	692 / 498	78.00



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



FILE NO: 156-36-UFC-20
DRAWING NO: Vaneck 1215 N-4H 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: June 24 2022
OPERATOR'S WELL NO. Vaneck 1215 N-4H
API WELL NO
47 - 041 - 05135
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1254.8' WATERSHED: Middle West Fork Creek
DISTRICT: Freemans Creek
SURFACE OWNER: HG Energy II, Appalachia, LLC, et al
ROYALTY OWNER: George W. Waggoner, et ux, et al LEASE NO: ACREAGE: 56.00
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ 6,790' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,100' 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

08/19/2022

WW-6A1
(5/13)

Operator's Well No. Vaneck 1215 N-4H

**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

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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: Accountant



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

4704105735

June 29, 2022

Cragin Blevins
WV DEP
Division of Oil & Gas
601 57th Street
Charleston, WV 25304

RE: Drilling Under Roads – Vaneck 1215 N-4H
Freemans Creek District, Lewis County
West Virginia

Dear Mr. Blevins -

HG Energy II Appalachia, LLC, is submitting the attached application for a new well work permit for the Vaneck 1215 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 Vaneck 1215 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 or 304-420-1119.

Very truly yours,

Diane C. White

Enclosures

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Environmental Protection

08/19/2022

HG Energy II Appalachia, LLC - Vaneck 1215 N-4H Lease Chain

1215N Tract	LEGACY LEASE NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE
1	FK051509	03-005C-0027-0001 03-005C-0029-0000	Q100665000	GEO. W. WAGGONER AND ROSA M. WAGGONER, HIS WIFE	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	NOT LESS THAN 1/8	73	383
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	85	141
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125	379
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	DEED	125	371
				PITTSBURG AND WEST VIRGINIA GAS COMPANY	EQUITABLE GAS COMPANY	ASSIGNMENT	216	185
				EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	246	192
				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 OF 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	170
				DOMINON 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	ASSIGNMENT (68%)	736	220
				8	FK052230	03-005C-0030-0000	Q100666000	FIELDING B. RILEY AND SAMUEL M. RILEY AND M. V. RILEY
E. W. BOYD	S. E. BARRETT	ASSIGNMENT	30					369
S. E. BARRETT	LOUIS BENNETT	ASSIGNMENT (50%)	36					517
LOUIS BENNETT AND S. E. BARRETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT (75%)	71					14
S. E. BARRETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	44					569
LOUIS BENNETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	44					571
J. M. GUFFEY AND JNO. H. GALEY	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	44					583
THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	85					141
THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125					379
THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	DEED	125					371
PITTSBURG AND WEST VIRGINIA GAS COMPANY	EQUITABLE GAS COMPANY	ASSIGNMENT	216					185
EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	246					192
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 OF 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					170
DOMINON 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

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17	FK052233 FK066405	p/o 03-005C-0003-0000	Q100761000 Q100761000	DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736	220
				JACOB MINTER AND PRISCILLA MINTER, HIS WIFE	E. W. BOYD	NOT LESS THAN 1/8	35	239
				CAROLINE MINTER	E. W. BOYD	NOT LESS THAN 1/8	35	223
				E. W. BOYD	S. E. BARRETT	ASSIGNMENT	30	369
				S. E. BARRETT	LOUIS BENNETT	ASSIGNMENT (50%)	36	517
				S. E. BARRETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	44	569
				LOUIS BENNETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	44	571
				J. M. GUFFEY AND JNO. H. GALEY	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	44	583
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	85	141
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125	379
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	DEED	125	371
				PITTSBURGH AND WEST VIRGINIA GAS COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	156	420
				PITTSBURGH AND WEST VIRGINIA GAS COMPANY	EQUITABLE GAS COMPANY	ASSIGNMENT	216	185
				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 OF 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	170				
DOMINON 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	ASSIGNMENT (68%)	736	220				
13	FK068184	p/o 03-005B-0013-0000 03-005B-0016-0000 03-005C-0001-0001	Q101066000	SOUTH PENN NATURAL GAS COMPANY; JOHN W. LOWTHER & MARIE LOWTHER, HIS WIFE; W. R. MINTER, SINGLE; J. S. MINTER, WIDOWER; FRANK MCCLUNG, WIDOWER; DORTHY STOUT & BENNIE STOUT, HER HUSBAND; MARY STOUT, A MARRIED WOMAN LIVING SEPARATE AND APART FROM HER HUSBAND; EDWARD T. MINTER & MARY JOSEPHINE MINTER, HIS WIFE; C. M. GARRETT, WIDOWER; JOHN E. GARRETT & HELEN H. GARRETT, HIS WIFE; L. EARL GARRETT & VIRGINIA G. GARRETT, HIS WIFE; ANICE G. BAKER & ARDEN C. BAKER, HER HUSBAND; ETHAL G. GUM & E. KEMP GUM, HER HUSBAND; EDNA G. BAKER & PAUL F. BAKER, HER HUSBAND; MAVIS G. COLE & DELBERT COLE, HER HUSBAND; BARYL G. TALBOTT & BROCK TALBETT, HER HUSBAND; MONA LEE SHUTTS & CREED L. SHUTTS, HER HUSBAND; WANDA G. FLESHER & R. R. FLESHER, HER HUSBAND; K. E. MCCLUNG & E. E. MCCLUNG, HIS WIFE; WILDA L. BERG & HENRY B. BERG, HER HUSBAND; HAROLD MCCLUNG & HELEN MCCLUNG, HIS WIFE; JOSEPH R. GARRETT & RUTH G. GARRETT, HIS WIFE; CHARLES M. GARRETT, JR. & HILDA L. GARRETT, HIS WIFE; CATHERINE WARE & DANCIL WARE, HER HUSBAND; GARNETTA KENNEDY & FRANK KENNEDY, HER HUSBAND; WILSIE M. TAYLOR & CHARLES R. TAYLOR, HER HUSBAND	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	254	127
				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 OF FARMOUT AGREEMENT	672	154

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 Environmental Protection

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				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	170
				DOMINON 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
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				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736	220
14	FK066407 FK066408 FK051005	03-005B-0015-0000	Q100312000 Q100733000 Q100914000	W.W. MINTER AND MARTHA J. MINTER, HIS WIFE, W.R. MINTER, SINGLE, AND J.S. MINTER AND VIRGINIA MINTER, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	153	65
				JOHN W. LOWTHER AND MARIE LOWTHER, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	240	141
				SOUTH PENN OIL COMPAY	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	240	150
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
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				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
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				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
				DOMINON 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	ASSIGNMENT (68%)	736	220				
16	FK052234 FK066405	p/o 03-005B-0015-0000	Q100274000	CAROLINE MINTER	E. W. BOYD	NOT LESS THAN 1/8	35	223
				E. W. BOYD	S. E. BARRETT	ASSIGNMENT	30	369
				S. E. BARRETT	LOUIS BENNETT	ASSIGNMENT (50%)	36	517
				LOUIS BENNETT AND S. E. BARRETT	J. M. GUFFEY AND JOHN H. GALEY	ASSIGNMENT (75%)	44	571
				S. E. BARRETT	J. M. GUFFEY AND JOHN H. GALEY	ASSIGNMENT	44	569
				LOUIS BENNETT	J. M. GUFFEY AND JOHN H. GALEY	ASSIGNMENT	44	571
				J. M. GUFFEY AND JOHN H. GALEY	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	44	583
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	85	141
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125	379
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	DEED	125	371
				PITTSBURG AND WEST VIRGINIA GAS COMPANY	EQUITABLE GAS COMPANY	ASSIGNMENT	216	185
				EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	246	192
				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 OF 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	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				

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				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 (68%)	736	220
22	FK052239	03-005B-0010-0000 03-005B-0022-0000	Q100431000	GEO. C. FRANCIS AND CHRISTIANA FRANCIS, HIS WIFE; AND W. W. BRANNON AND ADDIE BRANNON, HIS WIFE	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	NOT LESS THAN 1/8	55	126
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125	379
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	DEED	125	371
				PITTSBURGH AND WEST VIRGINIA GAS COMPANY AND THE PHILADELPHIA COMPANY OF WEST VIRGINIA	HOPE NATURAL GAS COMPANY	ASSIGNMENT	156	420
				PITTSBURGH AND WEST VIRGINIA GAS COMPANY	EQUITABLE GAS COMPANY	ASSIGNMENT	216	185
				EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	246	192
				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 OF 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	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	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736	220
				23	FK056122	03-005B-0020-0000 03-005B-0021-0000	Q100493000	JOHN T. BAILEY, INCOMTETENT, BY GEORGE I. DAVISSON, COMMITTEE
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 OF 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					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	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734					558
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736	220				
				C. FRANCIS AND GEO. C. FRANCIS	E. W. BOYD	NOT LESS THAN 1/8	35	219
				E. W. BOYD	S. E. BARRETT	ASSIGNMENT	30	369
				S. E. BARRETT	LOUIS BENNETT	ASSIGNMENT (50%)	36	517
				LOUIS BENNETT AND S. E. BARRETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT (75%)	71	14
				S. E. BARRETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	44	569
				LOUIS BENNETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	44	571
				J. M. GUFFEY AND JNO. H. GALEY	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	44	583
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	85	141
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125	379
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURG AND WEST VIRGINIA GAS COMPANY	DEED	125	371
				PITTSBURG AND WEST VIRGINIA GAS COMPANY	EQUITABLE GAS COMPANY	ASSIGNMENT	216	185

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27	FK052232	03-005B-0023-0000 03-005B-0024-0000	Q100760000	EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	246	192
				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 OF 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	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	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736	220
26	FK056567 FK056567-1	03-005B-0025-0000 03-005B-0025-0001 03-005B-0025-0002	Q100776000	F. M. MCKINLEY AND M. E. MCKINLEY, HIS WIFE	J. M. GUFFEY AND JOHN H. GALEY	NOT LESS THAN 1/8	44	194
				J. M. GUFFEY AND JOHN H. GALEY	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	73	318
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	85	141
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125	379
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	DEED	125	371
				PITTSBURGH AND WEST VIRGINIA GAS COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	174	231
				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 OF 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	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	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736	220
				28	FK056564	03-005B-0005-0000	Q100344000	L. E. GALL AND HENRIETTA GALL, HIS WIFE; AND J. L. GALL AND MARY E. GALL, HIS WIFE
J. N. BARNSDALL AND SOUTHERN OIL COMPANY	FRED S. RICH	DEED	46					170
FRED S. RICH AND M. B. RICH, HIS WIFE	GEORGE H. CORNWALL AND JOHN M. REED	ASSIGNMENT (12.5%)	46					228
FRED S. RICH AND M. B. RICH, HIS WIFE, GEORGE H. CORNWALL AND MARY D. CORNWALL, HIS WIFE, J. M. REED AND ELLA REED, HIS WIFE, (PARTNERS AS FRED S. RICH & CO.) AND W. I. GOBEL AND L. M. GOBEL, HIS WIFE	CRUDE OIL COMPANY	ASSIGNMENT	52					176
CRUDE OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	55					95
CRUDE OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	55					437
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 OF 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

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				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				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	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736	220
				W. S. BENNETT AND A. V. BENNETT, HIS WIFE	THE LEWIS OIL COMPANY	NOT LESS THAN 1/8	44	6
				THE LEWIS OIL COMPANY	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	44	562
				THE LEWIS OIL COMPANY	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	46	399
				J. M. GUFFEY AND JNO. H. GALEY	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	73	318
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125	379
				THE PITTSBURGH AND WEST VIRGINIA GAS COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	174	231
				HUNTER M. BENNETT AND MADGE BENNETT, HIS WIFE; GUFFEY OIL AND GAS ROYALTIES, INC.; AND JOSEPH SHIBEN AND MINNIE SHIBEN, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	235	105
				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 OF 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	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	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736	220
				JOHN S. BURNSIDE AND BIRD BURNSIDE	E. W. BOYD	NOT LESS THAN 1/8	35	234
				E. W. BOYD	S. E. BARRETT	ASSIGNMENT	30	369
				S. E. BARRETT	LOUIS BENNETT	ASSIGNMENT (50%)	36	517
				LOUIS BENNETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	44	571
				J. M. GUFFEY AND JNO. H. GALEY	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	44	583
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	85	141
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125	379
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	DEED	125	371
				PITTSBURGH AND WEST VIRGINIA GAS COMPANY	EQUITABLE GAS COMPANY	ASSIGNMENT	216	185
				EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	246	192
				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 OF 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	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

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				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 (68%)	736	220
5	FK053097	p/o 03-005C-0022-0000	Q100333000	F. WHITE	SOUTHERN OIL COMPANY	NOT LESS THAN 1/8	40	62
		p/o 03-005C-0022-0001		T. N.BARNSDALL, SOUTHERN OIL COMPANY, AND FRED S. RICH	RESERVE GAS COMPANY	ASSIGNMENT	85	106
		p/o 03-005C-0025-0000		RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
		p/o 03-005C-0027-0002		HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
		03-005C-0045-0000		CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
		03-005C-0046-0000		CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
		03-005D-0020-0000		CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
		p/o 03-005D-0035-0000		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	672	154
		p/o 03-005D-0036-0000		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
		03-005D-0036-0001		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
		03-005D-0036-0002		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
		03-005D-0037-0000		NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
		03-005D-0038-0000		DOMINON TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
		03-005D-0060-0000				SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499
		03-005D-0060-0001		THRU		THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
		03-005D-0060-0015				ASSIGNMENT (68%)	736	220
		03-005D-0061-0000						
03-005D-0061-0001								
03-005D-0062-0000								

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

Date of Notice Certification: 07/05/2022

API No. 47- _____ - _____
Operator's Well No. Vaneck 1215 N-5H
Well Pad Name: Vaneck 1215 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>539092.4</u>
County:	<u>Lewis</u>		Northing:	<u>4329872.7</u>
District:	<u>Freemans Creek</u>	Public Road Access:	<u>Mare Run Road / CR 10 / 9</u>	
Quadrangle:	<u>Camden WV 7.5's</u>	Generally used farm name:	<u>Vaneck</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>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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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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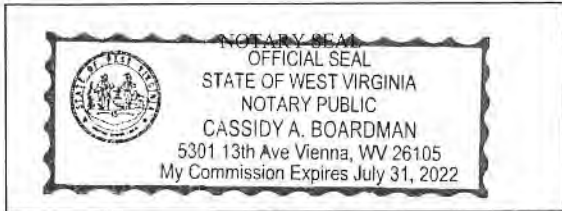
JUL 14 2022

08/19/2022
WV Department of
Environmental Protection

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 5th day of July, 2022.

Cassidy Boardman Notary Public

My Commission Expires 7/31/2022

Oil and Gas Privacy Notice:

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

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Office of Oil and Gas
JUL 14 2022
Department of Environmental Protection

WW-6A
(9-13)

4704105735
API NO. 47- -
OPERATOR WELL NO. Vaneck 1215 N1H - S12H
Well Pad Name: Vaneck 1215

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: 01/17/2022 Date Permit Application Filed: 01/25/22

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) * Not noticed as Surface owner is also the operator
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: Nancy Hayhurst
Address: 195 Rexroad Drive
Weston, WV 26452
Name: Woody Lumber Company
Address: 201 Vicksburg Road
Buckhannon, WV 26201

SURFACE OWNER(s) (Impoundments or Pits)
Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: NA
Address: _____

COAL OPERATOR
Name: NA
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Charles Curtis Gary Stalnaker Timothy Rittenhouse
Address: 377 Elk Lick Road 179 Elk Lick Road 1729 R Freemans Creek
Weston, WV 26452 Weston, WV 26452 Weston, WV 26452

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

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Office of Oil and Gas

JUL 14 2022

WV Department of
Environmental Protection

08/19/2022

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

WW-6A
(8-13)

API NO. 47- _____ - _____
OPERATOR WELL NO. Vaneck 1215 N1H - S12H
Well Pad Name: Vaneck 1215

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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Office of Oil and Gas

JUL 14 2022

WV Department of
Environmental Protection

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

08/19/2022

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

08/19/2022

WW-6A
(8-13)

API NO. 47-4704105735
OPERATOR WELL NO. Vaneck 1215 N1H - S12H
Well Pad Name: Vaneck 1215

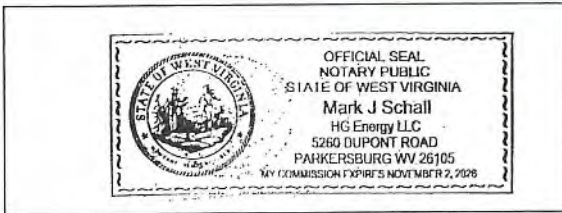
Notice is hereby given by:

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



Subscribed and sworn before me this 17th day of January, 2022.

[Signature] Notary Public

My Commission Expires 11/2/2026

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JUL 14 2022

WV Department of
Environmental Protection

08/19/2022



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

4704105735

January\19, 2022

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

RE: Vaneck 1215 N-1H – S-12H Well Work Permit Applications - Notification
Freemans Creek District, Lewis County
West Virginia

Dear Sir -

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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Office of Oil and Gas

JUL 14 2022

WV Department of
Environmental Protection

08/19/2022



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

4704105735

January\19, 2022

Timothy Rittenhouse
1729 R Freeman's Creek
Weston, WV 26452

RE: Vaneck 1215 N-1H – S-12H Well Work Permit Applications - Notification
Freemans Creek District, Lewis County
West Virginia

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Very truly yours,

Diane White

Diane C. White

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JUL 14 2022
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Environmental Protection

08/19/2022



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

4704105735

January\19, 2022

Gary Stalnaker
179 Elk Lick Road
Weston, WV 26452

RE: Vaneck 1215 N-1H – S-12H Well Work Permit Applications - Notification
Freemans Creek District, Lewis County
West Virginia

Dear Sir -

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Very truly yours,

Diane White

Diane C. White

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

4704105735

January\19, 2022

Charlie Curtis
377 Elk Lick Road
Weston, WV 26452

RE: Vaneck 1215 N-1H – S-12H Well Work Permit Applications - Notification
Freemans Creek District, Lewis County
West Virginia

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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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JUL 14 2022

WV Department of
Environmental Protection

08/19/2022



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

4704105735

January\19, 2022

Woody Lumber Company
201 Vicksburg Road
Buckhannon, WV 26201

RE: Vaneck 1215 N-1H – S-12H Well Work Permit Applications - Notification
Freemans Creek District, Lewis County
West Virginia

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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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JUL 14 2022
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Environmental Protection

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

4704105735

January\19, 2022

Nancy Hayhurst
195 Rexroad Drive
Weston, WV 26452

RE: Vaneck 1215 N-1H – S-12H Well Work Permit Applications - Notification
Freemans Creek District, Lewis County
West Virginia

Dear Ms. Hayhurst -

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.

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Very truly yours,

Diane White

Diane C. White

Enclosures

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Office of Oil and Gas
JUL 14 2022
WV Department of
Environmental Protection

08/19/2022

SUBJECT WELL
Vaneck 1215 N-4H



- McDougal
- Curtis
- Stalnaker
- Rittenhouse

1215 N-4H

◆ Denotes Possible Water Supply Source to be Tested

Section of
Camden and Big Isaac
7.5' Quadrangles
SCALE 1"=1000
08/19/2022

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: 12/29/2021 **Date of Planned Entry:** 01/05/2022

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: * *Notice not given to Surface Owner as SO is also the Operator*

SURFACE OWNER(s)

Name: HG Energy II Appalachia, LLC (pad, road, royalty owner)
Address: 5260 Dupont Road
Parkersburg, WV 26101

Name: _____
Address: _____

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: NA
Address: _____

MINERAL OWNER(s)

Name: ** See Attached List
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>39.117104 & 80.547833</u>
County:	<u>Lewis</u>	Public Road Access:	<u>Mare Run Road / SR 19</u>
District:	<u>Freeman's Creek</u>	Watershed:	<u>Middle West Fork River</u>
Quadrangle:	<u>Camden WV 7.5'</u>	Generally used farm name:	<u>Vaneck</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 57th 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.

Notice is hereby given by:

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

Address: 5260 Dupont Road
Parkersburg, WV 26101
Facsimile: 304-863-3172

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JUL 14 2022

WV Department of
Environmental Protection

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.

08/19/2022



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

4704105735

December 29, 2021

RE: Vaneck 1215 N-1H thru S-12H
Freeman's Creek District, Lewis County
West Virginia

Dear Royalty Owner

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 57th 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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4704105735

Marjorie W Hyatt & Linda C Weekley
2908 Macon St.
South Charleston, WV 25303

Bertha F. Benedum
604 Mare Run Rd.
Weston, WV 26452

J. Kent Burnside
645 Mare Run Rd.
Weston, WV 26452

Betty Craft
120 E. 7th St.
Weston, WV 26452

Patrick A. Nies
571 Deer Hill Rd.
Sykesville, MD 21784

Mary Katherine Hull
1000 Maplewood Dr. Apt. 3102
Bridgeport, WV 26330

Kimberly Diana Byrd Trustee
For Benefit of Kelly Ann Byrd
512 Jackson Ave. E.
Hampton, SC 29924

John E. Determan
& Carolyn S. Determan
302 Copley Rd.
Weston, WV 26452

William L. Perry, Jr. & Hilda R. Perry
93 Riverview Hts.
Weston, WV 26452

Mark R. Fitzpatrick
958 McCanns Run Rd.
Jane Lew, WV 26378

Jane E. Horn
958 McCanns Run Rd.
Jane Lew, WV 26378

Joan E. Burnside Anderson
PO Box 863
Blairdsen, CA 96103

Waco Oil and Gas Co.
PO Box 880
Glennville, WV 26351

Michael Ross
PO Box 219
Coalton, WV 26257-0219

Donald R. Reynolds
PO Box 607
Jane Lew, WV 26378

Mary Kemper Gum
47 Meade St.
Buckhannon, WV 26201

Richard Clay Hamrick
7 Westferry Ct.
Savannah, GA 31411

Steven Jay Hamrick
12104 Foley St.
Silver Spring, MD 20902

Linda Rose O'Hara
402 Thackery Ave.
Catonsville, MD 21228

Linda Lou Waggoner
24 Queen Eleanor Dr.
Elkton, MD 21921

Jack E. Waggoner
1450 Kent Rd.
Essex, MD 21221

Joseph C. Waggoner
8892 US Hwy. 33 W.
Camden, WV 26338

Mary Kay Small Justice
931 Beech Dr.
Greenwood, IN 46142

Bea Ann Small Wilfong
543 Lee Burke Rd.
Front Royal, VA 22630

Michael Lynn Small
456 Gaston Manor Rd.
Jane Lew, WV 26378

Sharon Lea Small Senk
24 Fairview Ave.
Ellington, CT 06029

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Dorsey Frazier Hamrick, Jr.
105 Mitchell Rd.
Airville, PA 17302

William Everett Hamrick
1224 Trappe Road
Street, MD 21154

Janet Rose Dawson
1744 Castleton Road
Darlington, MD 21034

Alice Faye McQueen
401 Winslow Drive
Bel Air, MD 21015

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Elizabeth Carol Brown ✓
84 Schoolhouse Lane
Windsor, PA 17366

Barbara Jean Evans ✓
1944 Franklin Church Road
Darlington, MD 21034

Vickie Lynn Erickson ✓
515 Evans Street
Perryville, MD 21903

Tina Louise Hamrick ✓
17104 Indian Grass Drive
Germantown, MD 20874

Raymond C. Waggoner ✓
7305 Church Ave.
Pittsburg, PA 15202

Margaret J. Morley ✓
4429 Francis Younge Way
Hollywood, SC 29449

Delores E. Small ✓
105 Howard St.
Clarksburg, WV 26301

J.P. Morgan Chase Bank, Trustee
For S. Austin Smith and C. Burke Morris
P.O. Box 659
Wichita Falls, TX 76307

J.P. Morgan Chase Bank ✓
Trustee For Will E. Morris Heirs
P.O. Box 659
Wichita Falls, TX 76307

Edward Earl Garrett ✓
2151 Rush Run Rd.
Weston, WV 26452

Bruce Hall Garrett,
Trustee for Helen Garrett, et al.
1326 Freemans Creek Rd.
Camden, WV 26338

Phillip E. Burnside ✓
3 Briarwood Ter.
Fairmont, WV 26554

John Kent Burnside ✓
645 Mare Run Rd.
Weston, WV 26452

Appalachian Royalties, Inc. ✓
PO Drawer 1917
Clarksburg, WV 26301

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08/19/2022

4704105735

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

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

Notice Time Requirement: Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

Date of Notice: 01/17/2022 **Date Permit Application Filed:** 01/27/2022

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

HAND DELIVERY CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided*, That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however*, That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

Notice is hereby provided to the SURFACE OWNER(s): * *Notice not sent as Surface Owner is also Operator*

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

Name: _____
Address: _____

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 539089.4
County: Lewis Northing: 4329869.2
District: Freemans Creek Public Road Access: Mare Run Road/ CR 10 / 9
Quadrangle: Camden WV 7.5' Generally used farm name: Vaneck
Watershed: Middle West Fork Creek

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: HG Energy II Appalachia, LLC
Address: 5260 Dupont Road
Parkersburg, WV 26101
Telephone: 304-420-1119
Email: dwhite@hgenergyllc.com *Diane White*
Facsimile: 304-863-3172

Authorized Representative: Diane White
Address: 5260 Dupont Road
Parkersburg, WV 26101
Telephone: 304-420-1119
Email: dwhite@hgenergyllc.com
Facsimile: 304-863-3172

Oil and Gas Privacy Notice:

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

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WW-6A5
(1/12)

Operator Well No. Vaneck 1215 N-1H to S-12H

4704105735

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

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

Date of Notice: 01/18/2022 **Date Permit Application Filed:** 01/27/2022

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

- CERTIFIED MAIL HAND
- RETURN RECEIPT REQUESTED DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s)* *Certified notice not sent as the surface owner is the operator*
(at the address listed in the records of the sheriff at the time of notice):

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

Notice is hereby given:

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

State: West Virginia	UTM NAD 83 Easting: 539089.4
County: Lewis	Northing: 4329869.2
District: Freemans Creek	Public Road Access: Mare Run Road / CR 10 / 9
Quadrangle: Camden WV 7.5'	Generally used farm name: Vaneck
Watershed: Middle West Fork Creek	

This Notice Shall Include:

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by W. Va. Code § 22-6A-10(b) to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

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

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WV Department of
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4704105735

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

D. Alan Reed, P.E.
State Highway Engineer

Jimmy Wriston, P. E.
Secretary of Transportation
Commissioner of Highways

December 27, 2021

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

Subject: DOH Permit for the Vaneck 1215 Pad, Lewis County
Vaneck 1215 N-4H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #07-2021-0333 which has been issued to HG Energy II Appalachia, LLC for access to the State Road for a well site located off Lewis County Route 10/9 SLS MP 1.40.

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. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

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

Cc: Diane White
HG Energy II Appalachia, LLC
CH, OM, D-6
File

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4704105735

HG Energy II Appalachia, LLC
List of Frac Additives by Chemical Name and CAS #
Vaneck 1215 Well Pad (N-1H to N-6H, S-7H to S-12H)

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

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WV Department of
 Environmental Protection

08/19/2022



APPROVED WVDEP OOG
3/2/2022

1215 Well Site
Site Design, Construction, Plan, &
Erosion and Sediment Control Plans
HG Energy LLC
Lewis County
Freemans Creek District
Latitude 39.11678083°
Longitude -80.54815578°
Middle West Fork River Watershed

Pertinent Site Information
1215 Well Site
Emergency Number: 304-269-8243
Freemans Creek District, Lewis County, WV
Watershed: Middle West Fork River Watershed
Site 911 Address:
HG Energy Contact Number: 304-420-1100

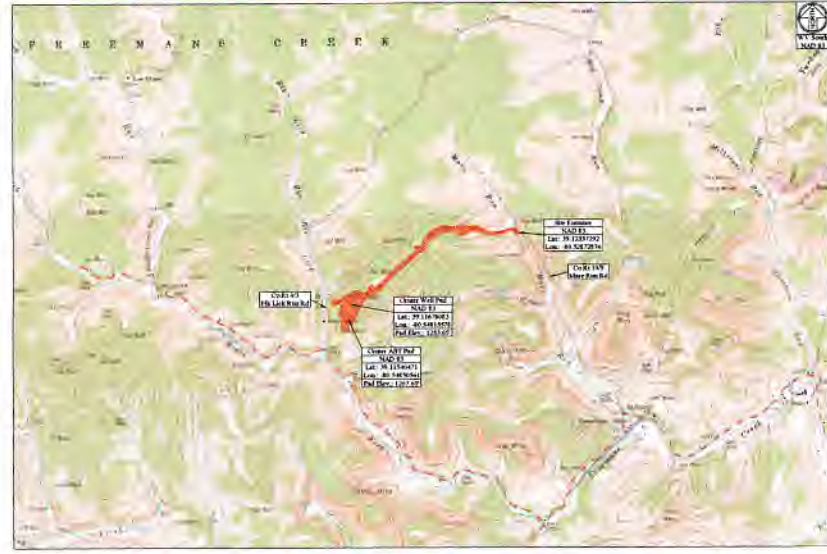
Property Owner Information - 1215 Well Site

Owner	Lot	Area (Sq Ft)	APR	APR	APR	APR	APR	APR	APR
HG Energy II Appalachia LLC	SC-27	1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Woods Limited Co	SC-28	1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HG Energy II Appalachia LLC	SC-29	1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HG Energy II Appalachia LLC	SC-30	1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Exhibit A: Final Design: Issue for Permitting

Site Elevation

Point	Elevation
1	1718.06
2	1718.12
3	1718.18
4	1718.24
5	1718.30
6	1718.36
7	1718.42
8	1718.48
9	1718.54
10	1718.60
11	1718.66
12	1718.72
13	1718.78
14	1718.84
15	1718.90
16	1718.96
17	1719.02
18	1719.08
19	1719.14
20	1719.20
21	1719.26
22	1719.32
23	1719.38
24	1719.44
25	1719.50
26	1719.56
27	1719.62
28	1719.68
29	1719.74
30	1719.80
31	1719.86
32	1719.92
33	1719.98
34	1720.04
35	1720.10
36	1720.16
37	1720.22
38	1720.28
39	1720.34
40	1720.40
41	1720.46
42	1720.52
43	1720.58
44	1720.64
45	1720.70
46	1720.76
47	1720.82
48	1720.88
49	1720.94
50	1721.00



Access Road

Owner	Lot	Area (Sq Ft)	APR	APR	APR	APR	APR	APR	APR
HG Energy II Appalachia LLC	SC-27	1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Woods Limited Co	SC-28	1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HG Energy II Appalachia LLC	SC-29	1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Disturbed Area

Category	Area (Sq Ft)
Well Pad Construction	1,000
Access Road Construction	1,000
Excavation	1,000
Grading	1,000
Clearing	1,000
Additional Information	1,000
Total Disturbed Area	6,000
Disturbed Area as % of Total	11.11%

1215 Well Site Quantities

Item	Quantity	Unit	Notes
Well Pad	1	Sq Ft	
Access Road	1	Sq Ft	
Excavation	1	Sq Ft	
Grading	1	Sq Ft	
Clearing	1	Sq Ft	
Additional Information	1	Sq Ft	

Disturbed Stream Impact (Linear Feet)

Stream	Impact (LF)	Stream Width (LF)	Stream Depth (LF)	Total Impact (LF)
Freemans Creek	100	10	2	112
Middle West Fork River	100	10	2	112
Total Stream Impact	200	20	4	224

Disturbed Wetland Impact (Square Feet)

Wetland	Impact (Sq Ft)	Wetland Area (Sq Ft)	Total Impact (Sq Ft)
Wetland 1	100	1,000	1,100
Wetland 2	100	1,000	1,100
Wetland 3	100	1,000	1,100
Wetland 4	100	1,000	1,100
Wetland 5	100	1,000	1,100
Total Wetland Impact	500	5,000	5,500

Well Table

Well ID	Coordinates	Depth	Notes
WV 8 NAD 81 N	7718.06	1718.06	
WV 8 NAD 81 E	7718.12	1718.12	
WV 8 NAD 81 S	7718.18	1718.18	
WV 8 NAD 81 W	7718.24	1718.24	
WV 8 NAD 81 NE	7718.30	1718.30	
WV 8 NAD 81 SE	7718.36	1718.36	
WV 8 NAD 81 SW	7718.42	1718.42	
WV 8 NAD 81 NW	7718.48	1718.48	
WV 8 NAD 81 NNE	7718.54	1718.54	
WV 8 NAD 81 SSE	7718.60	1718.60	
WV 8 NAD 81 SSW	7718.66	1718.66	
WV 8 NAD 81 NNW	7718.72	1718.72	
WV 8 NAD 81 NNE	7718.78	1718.78	
WV 8 NAD 81 SSE	7718.84	1718.84	
WV 8 NAD 81 SSW	7718.90	1718.90	
WV 8 NAD 81 NNW	7718.96	1718.96	
WV 8 NAD 81 NNE	7719.02	1719.02	
WV 8 NAD 81 SSE	7719.08	1719.08	
WV 8 NAD 81 SSW	7719.14	1719.14	
WV 8 NAD 81 NNW	7719.20	1719.20	
WV 8 NAD 81 NNE	7719.26	1719.26	
WV 8 NAD 81 SSE	7719.32	1719.32	
WV 8 NAD 81 SSW	7719.38	1719.38	
WV 8 NAD 81 NNW	7719.44	1719.44	
WV 8 NAD 81 NNE	7719.50	1719.50	
WV 8 NAD 81 SSE	7719.56	1719.56	
WV 8 NAD 81 SSW	7719.62	1719.62	
WV 8 NAD 81 NNW	7719.68	1719.68	
WV 8 NAD 81 NNE	7719.74	1719.74	
WV 8 NAD 81 SSE	7719.80	1719.80	
WV 8 NAD 81 SSW	7719.86	1719.86	
WV 8 NAD 81 NNW	7719.92	1719.92	
WV 8 NAD 81 NNE	7720.00	1720.00	

Project Contacts

HG Energy LLC
Head Office: Charleston, WV
Phone: 304-420-1100

Design and Engineer
Krauss & Kelly
304-326-4963 Ext. 200
304-326-4963 Ext. 200

HG Energy, LLC
2500 Dupont East
Parkersburg, WV 26101
PH: 304.420.1100
FAX: 304.420.1100

Environment
Verbal Disclosure as provided by Public Information Act
dated January 12, 2021

Topographic Information
The topographic information shown herein is based on aerial photography by Blue Mountain Aerial Mapping, Inc. WV 2010

MISS UTILITY OF WEST VIRGINIA
1-800-245-4848
304-251-1111
304-251-1112
304-251-1113
304-251-1114
304-251-1115
304-251-1116
304-251-1117
304-251-1118
304-251-1119
304-251-1120
304-251-1121
304-251-1122
304-251-1123
304-251-1124
304-251-1125
304-251-1126
304-251-1127
304-251-1128
304-251-1129
304-251-1130

1215 Well Site
Freemans Creek District
Lewis County, WV

Approach Route:
From I-79 near Lane Lane, WV. Traveling North on I-79, take I-79 to near Lane Lane. Turn Left onto Co Rd 7 (Freemans Creek Rd). Follow Co Rd 7 West for 0.5 mi. Turn Left onto US Rt 19 South. Follow US Rt 19 South for 4.9 mi. Turn Right onto Co Rd 12 (Jackson Mill Rd). Follow Co Rd 12 for 3.6 mi. Turn Left onto Co Rd 1 (Old Mill Rd). Follow Co Rd 1 for 0.1 mi. Turn Right onto Co Rd 10 (Valley Chapel Rd). Follow Co Rd 10 for 1.0 mi. Turn Right onto Co Rd 109 (Mare Run Rd). Follow Co Rd 109 for 1.5 mi. The access entrance will be on the Left (West) side of the road.



Well Location Description

All Pad construction complies with the following restrictions:

- *20' from any existing well or developed area and 100' from domestic sources.
- *20' from any occupied dwelling or built-up area 100' from any public or quasi-public areas.
- *100' from the edge of a discharge to a nearby receiving water body.
- *100' of a buffer or ground water table in a public water supply.

(WV) Location Restrictions of WV Code 22-6-10

Sheet

Sheet	Description
1	Cover Sheet
V1	Schedule of Quantities
VI-24	Site Notice
7	Pre-Construction Site Conditions
8	Site Soil Map
9	Clearing Exhibit
10	Overall Plan View
11	EAS Plan View
12-16	Top Key Exhibit
17-18	Plan Views
19-21	Cross Sections - Well Pad/AST Pad
22	Cross Sections - Access Road
23	Construction Exhibit
24	Landowner Disturbed Area Exhibit
25	Site Reclamation
26	Production Exhibit
27	Erosion and Sediment Control Details
28	Access Road Details
29	Well Pad Details

Scale: As Shown
Date: 12/30/2021
Designed By: ZS
File No:
Sheet 1 of 21

HG ENERGY

Krauss & Kelly

1215 Well Site
Freemans Creek District
Lewis County, WV

DATE: 12/30/2021
SCALE: AS SHOWN
DESIGNED BY: ZS
FILE NO:
SHEET 1 OF 21

1215 Well Site
HG Energy LLC
Exhibit A: Final Design: Issue for Permitting

HG Energy II
 Appalachia LLC
 TM: SC-29
 DB/PG: 765/894

HG Energy II
 Appalachia LLC
 TM: SC-27.1
 DB/PG: 765/894

Raymond & Colena
 Waggoner
 TM: SC-25
 DB/PG: 567/416

Daniel & Rena
 Waggoner
 TM: SC-12
 DB/PG: 733/664

HG Energy II
 Appalachia LLC
 TM: SC-29
 DB/PG: 765/894

APPROVED
WVDEP OOG
 3/2/2022

HG Energy II
 Appalachia LLC
 TM: SC-29
 DB/PG: 765/894



Legend

Original Ground 2' Contour	30" Concrete Pipe Sock	Delimited Wellhead
Original Ground 10' Contour	24" Concrete Pipe Sock	Delimited Stream
Design 10' Contour	18" Pipe	Two Key
Design 20' Contour	12" Pipe	Energy Control (Basket) Slope Area
Design 30' Contour	6" Pipe	Energy Control (Basket) Slope Area
Design 40' Contour	3" Pipe	Energy Control (Basket) Slope Area
Design 50' Contour	1.5" Pipe	Energy Control (Basket) Slope Area
Design 60' Contour	0.75" Pipe	Energy Control (Basket) Slope Area
Design 70' Contour	0.375" Pipe	Energy Control (Basket) Slope Area
Design 80' Contour	0.1875" Pipe	Energy Control (Basket) Slope Area
Design 90' Contour	0.09375" Pipe	Energy Control (Basket) Slope Area
Design 100' Contour	0.046875" Pipe	Energy Control (Basket) Slope Area
Design 110' Contour	0.0234375" Pipe	Energy Control (Basket) Slope Area
Design 120' Contour	0.01171875" Pipe	Energy Control (Basket) Slope Area
Design 130' Contour	0.005859375" Pipe	Energy Control (Basket) Slope Area
Design 140' Contour	0.0029296875" Pipe	Energy Control (Basket) Slope Area
Design 150' Contour	0.00146484375" Pipe	Energy Control (Basket) Slope Area
Design 160' Contour	0.000732421875" Pipe	Energy Control (Basket) Slope Area
Design 170' Contour	0.0003662109375" Pipe	Energy Control (Basket) Slope Area
Design 180' Contour	0.00018310546875" Pipe	Energy Control (Basket) Slope Area
Design 190' Contour	9.1552734375e-05" Pipe	Energy Control (Basket) Slope Area
Design 200' Contour	4.57763671875e-05" Pipe	Energy Control (Basket) Slope Area
Design 210' Contour	2.288818359375e-05" Pipe	Energy Control (Basket) Slope Area
Design 220' Contour	1.1444091796875e-05" Pipe	Energy Control (Basket) Slope Area
Design 230' Contour	5.7220458984375e-06" Pipe	Energy Control (Basket) Slope Area
Design 240' Contour	2.86102294921875e-06" Pipe	Energy Control (Basket) Slope Area
Design 250' Contour	1.430511474609375e-06" Pipe	Energy Control (Basket) Slope Area
Design 260' Contour	7.152557373046875e-07" Pipe	Energy Control (Basket) Slope Area
Design 270' Contour	3.5762786865234375e-07" Pipe	Energy Control (Basket) Slope Area
Design 280' Contour	1.78813934326171875e-07" Pipe	Energy Control (Basket) Slope Area
Design 290' Contour	8.94069671630859375e-08" Pipe	Energy Control (Basket) Slope Area
Design 300' Contour	4.470348358154296875e-08" Pipe	Energy Control (Basket) Slope Area
Design 310' Contour	2.2351741790771484375e-08" Pipe	Energy Control (Basket) Slope Area
Design 320' Contour	1.11758708953857421875e-08" Pipe	Energy Control (Basket) Slope Area
Design 330' Contour	5.58793544769287109375e-09" Pipe	Energy Control (Basket) Slope Area
Design 340' Contour	2.793967723846435546875e-09" Pipe	Energy Control (Basket) Slope Area
Design 350' Contour	1.3969838619232177734375e-09" Pipe	Energy Control (Basket) Slope Area
Design 360' Contour	6.9849193096160888671875e-10" Pipe	Energy Control (Basket) Slope Area
Design 370' Contour	3.49245965480804443359375e-10" Pipe	Energy Control (Basket) Slope Area
Design 380' Contour	1.746229827404022216796875e-10" Pipe	Energy Control (Basket) Slope Area
Design 390' Contour	8.731149137020111083984375e-11" Pipe	Energy Control (Basket) Slope Area
Design 400' Contour	4.3655745685100555419921875e-11" Pipe	Energy Control (Basket) Slope Area
Design 410' Contour	2.18278728425502777099609375e-11" Pipe	Energy Control (Basket) Slope Area
Design 420' Contour	1.091393642127513885498046875e-11" Pipe	Energy Control (Basket) Slope Area
Design 430' Contour	5.4569682106375694274990234375e-12" Pipe	Energy Control (Basket) Slope Area
Design 440' Contour	2.72848410531878471374951171875e-12" Pipe	Energy Control (Basket) Slope Area
Design 450' Contour	1.364242052659392356874755859375e-12" Pipe	Energy Control (Basket) Slope Area
Design 460' Contour	6.8212102632969617843747779296875e-13" Pipe	Energy Control (Basket) Slope Area
Design 470' Contour	3.41060513164848089218738896484375e-13" Pipe	Energy Control (Basket) Slope Area
Design 480' Contour	1.705302565824240446093694482421875e-13" Pipe	Energy Control (Basket) Slope Area
Design 490' Contour	8.5265128291212022304684724112109375e-14" Pipe	Energy Control (Basket) Slope Area
Design 500' Contour	4.26325641456060111523423620560546875e-14" Pipe	Energy Control (Basket) Slope Area
Design 510' Contour	2.131628207280300557617118102802734375e-14" Pipe	Energy Control (Basket) Slope Area
Design 520' Contour	1.0658141036401502788085590514013671875e-14" Pipe	Energy Control (Basket) Slope Area
Design 530' Contour	5.3290705182007513944042952570068359375e-15" Pipe	Energy Control (Basket) Slope Area
Design 540' Contour	2.66453525910037569720214762850341796875e-15" Pipe	Energy Control (Basket) Slope Area
Design 550' Contour	1.332267629550187798601073814251708984375e-15" Pipe	Energy Control (Basket) Slope Area
Design 560' Contour	6.661338147750938993005369071258544421875e-16" Pipe	Energy Control (Basket) Slope Area
Design 570' Contour	3.3306690738754694965026845356292722109375e-16" Pipe	Energy Control (Basket) Slope Area
Design 580' Contour	1.66533453693773474825134226781463611046875e-16" Pipe	Energy Control (Basket) Slope Area
Design 590' Contour	8.3266726846886737412567111339071730234375e-17" Pipe	Energy Control (Basket) Slope Area
Design 600' Contour	4.16333634234433687062835566695358651171875e-17" Pipe	Energy Control (Basket) Slope Area
Design 610' Contour	2.081668171172168435314177833476793255859375e-17" Pipe	Energy Control (Basket) Slope Area
Design 620' Contour	1.04083408558608421765708891673839662779296875e-17" Pipe	Energy Control (Basket) Slope Area
Design 630' Contour	5.20417042793042108828544458369198313896484375e-18" Pipe	Energy Control (Basket) Slope Area
Design 640' Contour	2.602085213965210544142722291845991569482421875e-18" Pipe	Energy Control (Basket) Slope Area
Design 650' Contour	1.301042606982605272071361145922995784741171875e-18" Pipe	Energy Control (Basket) Slope Area
Design 660' Contour	6.505213034913026360356805729614978923705859375e-19" Pipe	Energy Control (Basket) Slope Area
Design 670' Contour	3.2526065174565131801784028648074894611879296875e-19" Pipe	Energy Control (Basket) Slope Area
Design 680' Contour	1.62630325872825659008920143240374473059396484375e-19" Pipe	Energy Control (Basket) Slope Area
Design 690' Contour	8.13151629364128295044600716120187236296982421875e-20" Pipe	Energy Control (Basket) Slope Area
Design 700' Contour	4.06575814682064147522300358060093618148496484375e-20" Pipe	Energy Control (Basket) Slope Area
Design 710' Contour	2.032879073410320737611501790300468090742482421875e-20" Pipe	Energy Control (Basket) Slope Area
Design 720' Contour	1.016439536705160368805750895150234045371241171875e-20" Pipe	Energy Control (Basket) Slope Area
Design 730' Contour	5.082197683525801844402875477626170226856205859375e-21" Pipe	Energy Control (Basket) Slope Area
Design 740' Contour	2.5410988417629009222014377388130851133428129296875e-21" Pipe	Energy Control (Basket) Slope Area
Design 750' Contour	1.270549420881450461100718869406752566714166484375e-21" Pipe	Energy Control (Basket) Slope Area
Design 760' Contour	6.3527471044072523055035943470337628335707332421875e-22" Pipe	Energy Control (Basket) Slope Area
Design 770' Contour	3.1763735522036261527517971735168814167853666205859375e-22" Pipe	Energy Control (Basket) Slope Area
Design 780' Contour	1.5881867761018130763758985867584407083926833129296875e-22" Pipe	Energy Control (Basket) Slope Area
Design 790' Contour	7.940933880509065381889499293392203541963416666205859375e-23" Pipe	Energy Control (Basket) Slope Area
Design 800' Contour	3.970466940254532690944749646696101770981708333129296875e-23" Pipe	Energy Control (Basket) Slope Area
Design 810' Contour	1.98523347012726634547237482334805088549085416666205859375e-23" Pipe	Energy Control (Basket) Slope Area
Design 820' Contour	9.9261673506363317273618724116902544274504270833129296875e-24" Pipe	Energy Control (Basket) Slope Area
Design 830' Contour	4.963083675318165863680936205845127213727125416666205859375e-24" Pipe	Energy Control (Basket) Slope Area
Design 840' Contour	2.4815418376590829318404681029225636068636270833129296875e-24" Pipe	Energy Control (Basket) Slope Area
Design 850' Contour	1.2407709188295414659202340514612818034318135416666205859375e-24" Pipe	Energy Control (Basket) Slope Area
Design 860' Contour	6.2038545941477073296011720257306401717157636666205859375e-25" Pipe	Energy Control (Basket) Slope Area
Design 870' Contour	3.10192729707385366480058601286532008585786833129296875e-25" Pipe	Energy Control (Basket) Slope Area
Design 880' Contour	1.55096364853692683240029300643266004292893416666205859375e-25" Pipe	Energy Control (Basket) Slope Area
Design 890' Contour	7.754818242684634162001465003213300214644670833129296875e-26" Pipe	Energy Control (Basket) Slope Area
Design 900' Contour	3.877409121342317081000732501606650107222335416666205859375e-26" Pipe	Energy Control (Basket) Slope Area
Design 910' Contour	1.93870456067115854050036625080332505361116770833129296875e-26" Pipe	Energy Control (Basket) Slope Area
Design 920' Contour	9.69352280335579270250018312540166251805558885416666205859375e-27" Pipe	Energy Control (Basket) Slope Area
Design 930' Contour	4.846761401677896351250009156252001259027794270833129296875e-27" Pipe	Energy Control (Basket) Slope Area
Design 940' Contour	2.42338070083894817562500457812600062951389636666205859375e-27" Pipe	Energy Control (Basket) Slope Area
Design 950' Contour	1.211690350419474087812502289063000314756946833129296875e-27" Pipe	Energy Control (Basket) Slope Area
Design 960' Contour	6.05845175209737043906251144531500015737847336666205859375e-28" Pipe	Energy Control (Basket) Slope Area
Design 970' Contour	3.0292258760486852195312557226575000786892366833129296875e-28" Pipe	Energy Control (Basket) Slope Area
Design 980' Contour	1.51461293802434260976562786327875003934461833129296875e-28" Pipe	Energy Control (Basket) Slope Area
Design 990' Contour	7.573064690121713048828139316393750019672230833129296875e-29" Pipe	Energy Control (Basket) Slope Area
Design 1000' Contour	3.786532345060856524414069658196875000983611516666205859375e-29" Pipe	Energy Control (Basket) Slope Area

Disturbed Area

Well Pad Construction	4.50 AC
Well Pad Construction	1.20 AC
Access Road Construction	0.97 AC
Energy Control (Basket) Slope Area	2.82 AC
Additional Clearing	18.87 AC
Total Disturbed Area	28.36 AC

Additional Information

Total Wetland Area (Disturbed)	11.86 AC
Total Clear Part of Access Road	0.81 AC

Justin
 TM: SC-28
 DB/PG: FID3/596

Revision: 01 (12/20/21) Design: 100% Finalization

HG ENERGY LLC

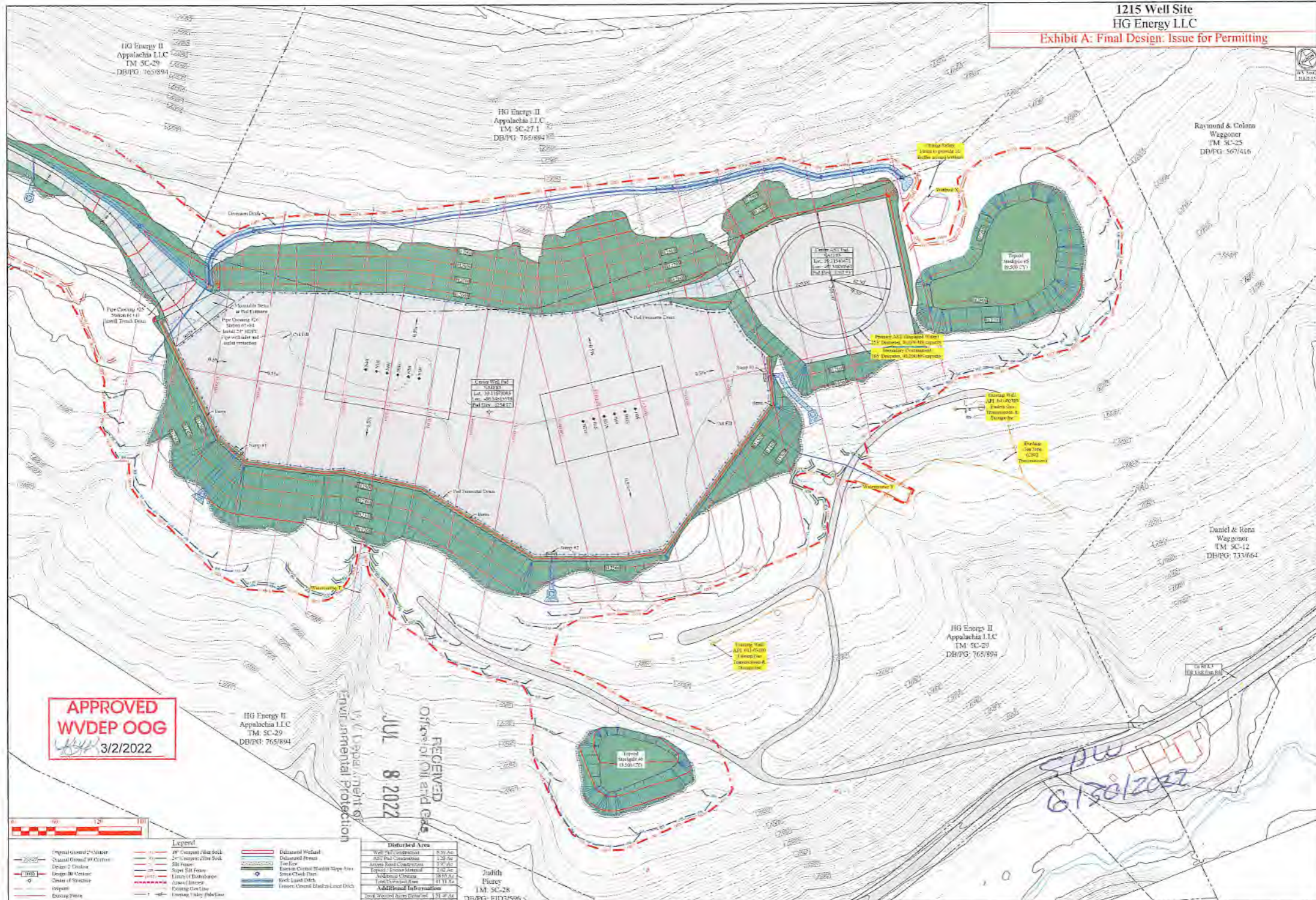
THIS DOCUMENT PREPARED FOR HG ENERGY LLC

K&S SURVEYING

1215 Well Site
 Freemans Creek District
 Lewis County, WV

Date: 12/30/2021
 Scale: As Shown
 Designed By: JS
 File No:
 Sheet 16 of 26

1215 Well Site
 HG Energy LLC
 Exhibit A: Final Design. Issue for Permitting



HG Energy II
 Appalachia LLC
 TM 5C-29
 DB/PG: 765/894

HG Energy II
 Appalachia LLC
 TM 5C-27.1
 DB/PG: 765/894

Raymond & Colton
 Waggoner
 TM 5C-25
 DB/PG: 567/416

Daniel & Rona
 Waggoner
 TM 5C-12
 DB/PG: 733/664

HG Energy II
 Appalachia LLC
 TM 5C-29
 DB/PG: 765/894

APPROVED
 WVDEP OOG
 3/2/2022

HG Energy II
 Appalachia LLC
 TM 5C-29
 DB/PG: 765/894

RECEIVED
 Office of Oil and Gas
 JUL 8 2022
 Environmental Protection
 W.V. LAPPAL, Director

SPW
 8/30/2022



Legend

Orange/Green 2" Center	20' Contour (Blue/Red)	Disturbed Areas
Orange/Green 10' Center	20' Contour (Blue/Red)	Disturbed Areas
Orange/Green 20' Center	20' Contour (Blue/Red)	Disturbed Areas
Orange/Green 30' Center	20' Contour (Blue/Red)	Disturbed Areas
Orange/Green 40' Center	20' Contour (Blue/Red)	Disturbed Areas
Orange/Green 50' Center	20' Contour (Blue/Red)	Disturbed Areas
Orange/Green 60' Center	20' Contour (Blue/Red)	Disturbed Areas
Orange/Green 70' Center	20' Contour (Blue/Red)	Disturbed Areas
Orange/Green 80' Center	20' Contour (Blue/Red)	Disturbed Areas
Orange/Green 90' Center	20' Contour (Blue/Red)	Disturbed Areas
Orange/Green 100' Center	20' Contour (Blue/Red)	Disturbed Areas

Disturbed Areas

Well Pad Construction	8.50 Ac
20' Pad Construction	2.25 Ac
Access Road Construction	1.00 Ac
Level 1 - Erosion Control	2.50 Ac
Additional Contingency	18.00 Ac
Level 2 - Erosion Control	11.13 Ac
Total Disturbed Areas	47.43 Ac

Additional Information
 Total Disturbed Areas: 47.43 Ac
 Total Erosion Control: 14.63 Ac

Judith
 Pacey
 TM 5C-28
 DB/PG: FID3/596



THIS DOCUMENT
 PREPARED FOR
 HG ENERGY LLC



Site Plan
 1215 Well Site
 Freemans Creek District
 Lewis County, WV

Date: 12/30/2021
 Scale: As Shown
 Designed By: JS
 PLS: JS
 Sheet 16 of 26