



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

Thursday, January 20, 2022
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for BURNSIDE 1214 S-4H
47-041-05729-00-00

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: BURNSIDE 1214 S-4H
Farm Name: JOHN K BURNSIDE ET AL
U.S. WELL NUMBER: 47-041-05729-00-00
Horizontal 6A New Drill
Date Issued: 1/20/2022

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.

02/04/2022

WW-6B
(04/15)

4704105729
API NO. 47-
OPERATOR WELL NO. Burnside 1214 S-4H
Well Pad Name: Burnside 1214

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

1) Well Operator: HG Energy II Appalachia, L.P. 494519932 Lewis Freemantle Camden 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Burnside 1214 S-4H Well Pad Name: Burnside 1214

3) Farm Name/Surface Owner: John K Burnside, et al Public Road Access: Mare Run Rd at CR 10/9

4) Elevation, current ground: 1160' Elevation, proposed post-construction: 1159.20'

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

(b) If Gas Shallow Deep
Horizontal

SDW
12/3/2021

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 6685'/6767' and 82' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6693'

9) Formation at Total Vertical Depth: Marcellus

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Office of Oil and Gas

10) Proposed Total Measured Depth: 26,791'

DEC 16 2021

11) Proposed Horizontal Leg Length: 18,704'

WV Department of
Environmental Protection

12) Approximate Fresh Water Strata Depths: 803', 950'

13) Method to Determine Fresh Water Depths: Nearest offset well data, (47-041-00283, 0210,)

14) Approximate Saltwater Depths: None found

15) Approximate Coal Seam Depths: 510', 910', 915' (Surface casing is being extended to cover the coal)

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: _____

WW-6B
(04/15)

API NO. 47- _____
 OPERATOR WELL NO. Burnside 1214 S-4H
 Well Pad Name: Burnside 1214

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	New	LS	157.5	120'	120' /	Drilled In
Fresh Water/Coal	20"	NEW	J-55	94	1050'	1050' /	CTS
Intermediate 1	13 3/8"	NEW	J-55 BTC	68	2050'	2050' /	CTS
Intermediate 2	9 5/8"	NEW	J-55 BTC	40	2850'	2850' /	CTS
Production	5 1/2"	NEW	P-110 HP	23	26791'	26791' /	CTS
Tubing							
Liners							

3000
12/13/2021

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	40% excess, Tail 5% excess
Intermediate 2	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	40% excess, Tail 5% excess
Production	5 1/2"	8 1/2"	.415	16240	12500	Type 1/Class A	20% excess yield @ 1.10, Tail 5% excess
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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Office of Oil and Gas
DEC 16 2021
WV Department of Environmental Protection

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 6693'. Drill horizontal leg to estimated 18,704' lateral length, 26,791' 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): 6.32 acres

22) Area to be disturbed for well pad only, less access road (acres): 4.12 acres

23) Describe centralizer placement for each casing string:

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

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

Conductor -N/A, Casing to be drilled in w/ Dual Rotary Rig.
Fresh Water/Coal - 15.9 ppg PNE-1 + 3% bwoc CaCl, 40% Excess Yield = 1.20, CTS
Intermediate 1 - 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
Intermediate 2 - 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
Production - Lead: 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170, Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess, Lead Yield=1.19, Tail Yield=1.94, CTS

25) Proposed borehole conditioning procedures:

Conductor - Ensure the hole is clean at TD.
Fresh Water/Coal - Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.
Intermediate 1 - Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.
Intermediate 2 - Once casing is at setting depth, Circulate and condition 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.

*Note: Attach additional sheets as needed.

HG Energy II Appalachia, LLC
 Burnside 1214 Well Pad (N-1H, N-2H, N-3H, S-4H, S-5H, S-6H)
 Cement Additives

Material Name	Material Type	Material Description	CAS #																		
Premium NE-1	Portland Cement	Premium NE-1 is a portland cement with early compressive strength properties.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Portland cement</td> <td>90 - 100</td> <td>65997-15-1</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> <tr> <td>Magnesium oxide</td> <td>1 - 5</td> <td>1309-48-4</td> </tr> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>0.1 - 1</td> <td>14808-60-7</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 antifoaming agent used in cementing operations. It is very effective minimizing air entrapment and preventing foaming tendencies of latex systems.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Tributyl phosphate</td> <td>90 - 100</td> <td>126-73-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Tributyl phosphate	90 - 100	126-73-8												
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Granulated Sugar	Retarder	Used to retard cement returns at surface. A proprietary product that provides expansive properties and improves bonding at low to moderate temperatures.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Sucrose</td> <td>90 - 100</td> <td>57-50-1</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Sucrose	90 - 100	57-50-1												
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EC-1	Gas Migration	Multi-purpose polymer additive used to control free fluid, fluid loss, rheology, and gas migration.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table>	Ingredient name	%	CAS number	No hazardous ingredient														
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Poz (Fly Ash)	Base	A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Crystalline silica: Quartz (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-Glucoopyranose, 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-Glucoopyranose, 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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02/04/2022

***** 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)
 B346 - 0.5% BWOB Fluid Loss / D013 - 0.75% BWOB Retarder / D47 - 0.02 gal / sack VRWOB Anti Foam / D202 - 0.15% BWOB
 Dispersant / D095 1.5 lb per BBL CamiNET* - 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 GasBLACK* / D013 - 0.3% BWOB Retarder / D047 - 0.02 gal / sack Anti Foam /
 DB01 - 0.03 gal / sack Retarder - 0% Excess

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1214 S-4H
Marcellus Shale Horizontal
Lewis County, WV



				1214 S-4H SHL				14206317.938N 1775721.605E					
Ground Elevation		1159'				1214 S-4H LP				14205095.34N 1773604.89E			
Azim		160.539°				1214 S-4H BHL				14187466.22N 1779834.36E			
WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS			
	30"	30" 157.5# LS	Conductor	0	120	AIR	N/A, Casing to be drilled in w/ Dual Rotary Rig	N/A	Ensure the hole is clean at TD.	Conductor casing = 0.5" wall thickness			
	26"	20" 94# J-55	Fresh Water	0	200, 550, 800	AIR	15.6 ppg Class A Neat 94#/sk 40% Excess Yield=1.18 / 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			
			Killing Coal	910	915								
			Fresh Water Protection	0	1050								
	17.5'	13-3/8" 68# J-55 BTC	Little Lime	1454	1482	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 = 0.430" wall thickness Burst=3450 psi			
			Big Lime	1509	1589								
			Injun / Ganiz (Storage)	1571 / 1854	1679 / 1914								
			Intermediate 1	0	2050								
	12.25"	9-5/8" 40# J-55 BTC	Fifty / Thirty Foot	1970 / 2069	1990 / 2084	AIR / KCL - Salt Polymer	15.5 ppg Class A 94#/sk 1% Calcium BWOC - 40% Excess Yield=1.2 / CTS	Bow Spring on first 2 joints then every third joint to 100' form surface	Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.395" wall thickness Burst=3950 psi			
			Gordon Stray / Gordon	2099 / 2134	2136 / 2214								
			5th Sand	2354	2399								
			Bayard / Warren	2434 / 2729	2464 / 2764								
			Intermediate 2	0	2850								
	8.75" Vertical	5-1/2" 23# P-110 HP CDC HTQ	Speechley	3065	3030	AIR / 9.0ppg SOBM	Class A 14.8 ppg Yield 1.34 D255 - 0.4% BWOB Fluid Loss D198 - 0.55% BWOB Retarder D047 - 0.02 gal / sack Anti Foam D208 - 0.05% BWOB Viscosifier 10% Excess	Run 1 spiral centralizer every 5 joints from the top of the curve to surface.	Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.415" wall thickness Burst=16240 psi Note Actual centralizer schedules may be changed due to hole conditions			
			Balltown	3178	3238								
Bradford			3841	4374									
8.5" Curve	Benson		4362	4374	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.							
	Rhinstreet		6009	6255									
	Cashaqua		6255	6355									
	Middlesex		6355	6387									
	West River		6387	6458									
	Burkett		6458	6458									
	Tully Limestone		6458	6576									
8.5" Lateral	Hamilton	6576	6685	11.5ppg-12.5ppg SOBM	Run 1 spiral centralizer every 3 joints from the 1st 5.5" long joint to the top of the curve.								
	Marcellus	6685	6757										
	TMD / TVD (Production)	26791	6693										
			Onondaga	6767									

LP @ 6693' TVD / 8087' MD

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

+/-18704' ft Lateral

TD @ +/-6693' TVD
+/-26791' MD

X=centralizers

WW-9
(4/16)

API Number 47 - _____ - _____
Operator's Well No. Bumside 1214 S-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 _____)

*5 DW
7/1/2021*

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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Vertical - Air, Air/KCl, Air/SOBM, Horizontal - SOB

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

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

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

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

-Landfill or offsite name/permit number? See Attached

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

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

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

Company Official Signature Diane White
Company Official (Typed Name) Diane White
Company Official Title Agent

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WV Department of
Environmental Protection

Subscribed and sworn before me this 3rd day of May, 20 21

Cassidy Borden Notary Public
My commission expires 7/31/2022



HG Energy II Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 6.32 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
Tall Fescue	40
Ladino Clover	5

Seed Type	lbs/acre
Tall Fescue	40
Ladino Clover	5

Maintain E&S controls through the drilling and completion process

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

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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Environmental Protection

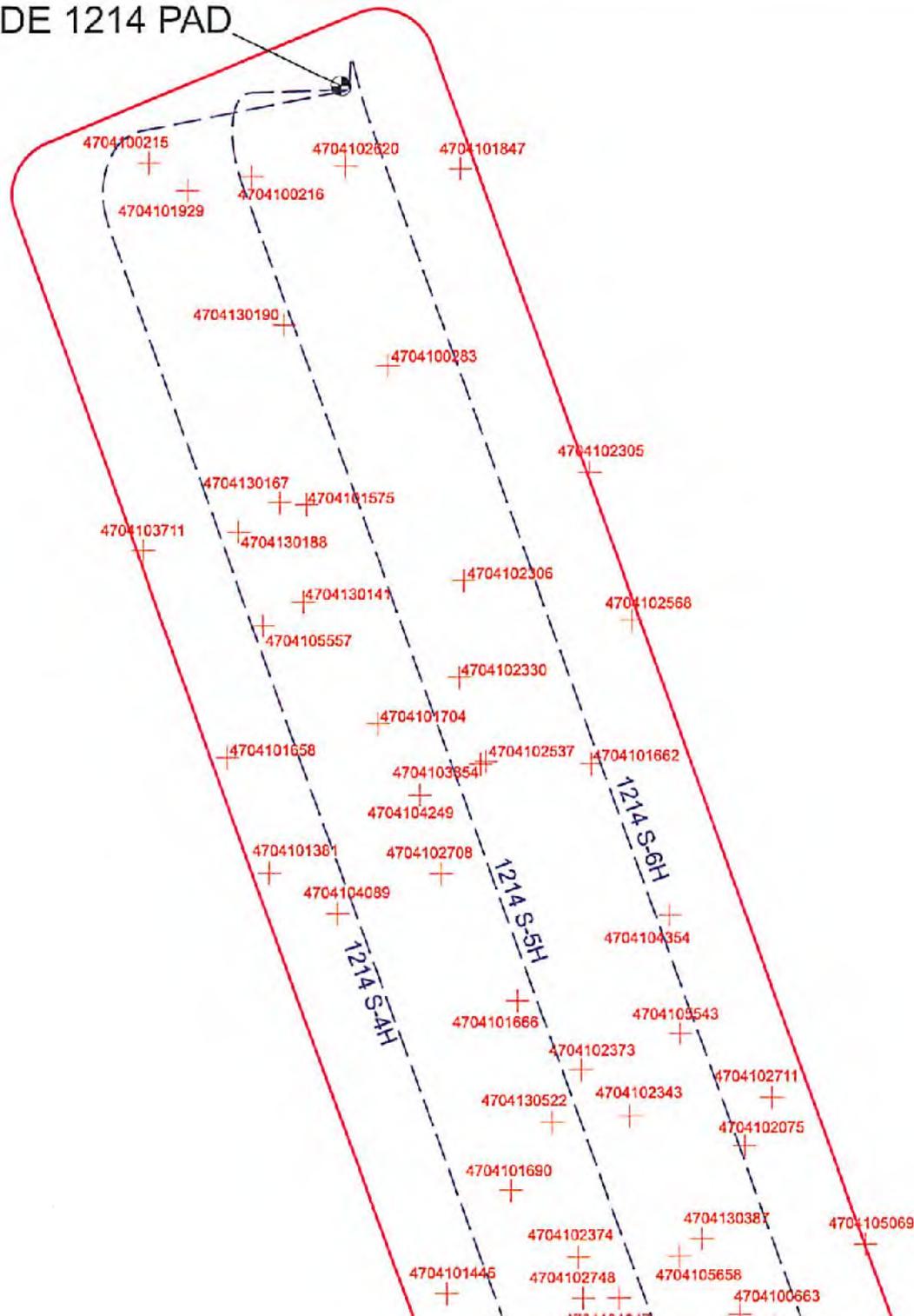
Title: WV DEP Oil & Gas Inspector

Date: 7/1/2021

Field Reviewed? Yes No

BURNSIDE 1214 PAD

4704105729

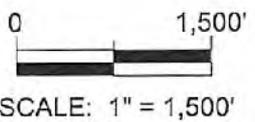


Well Key

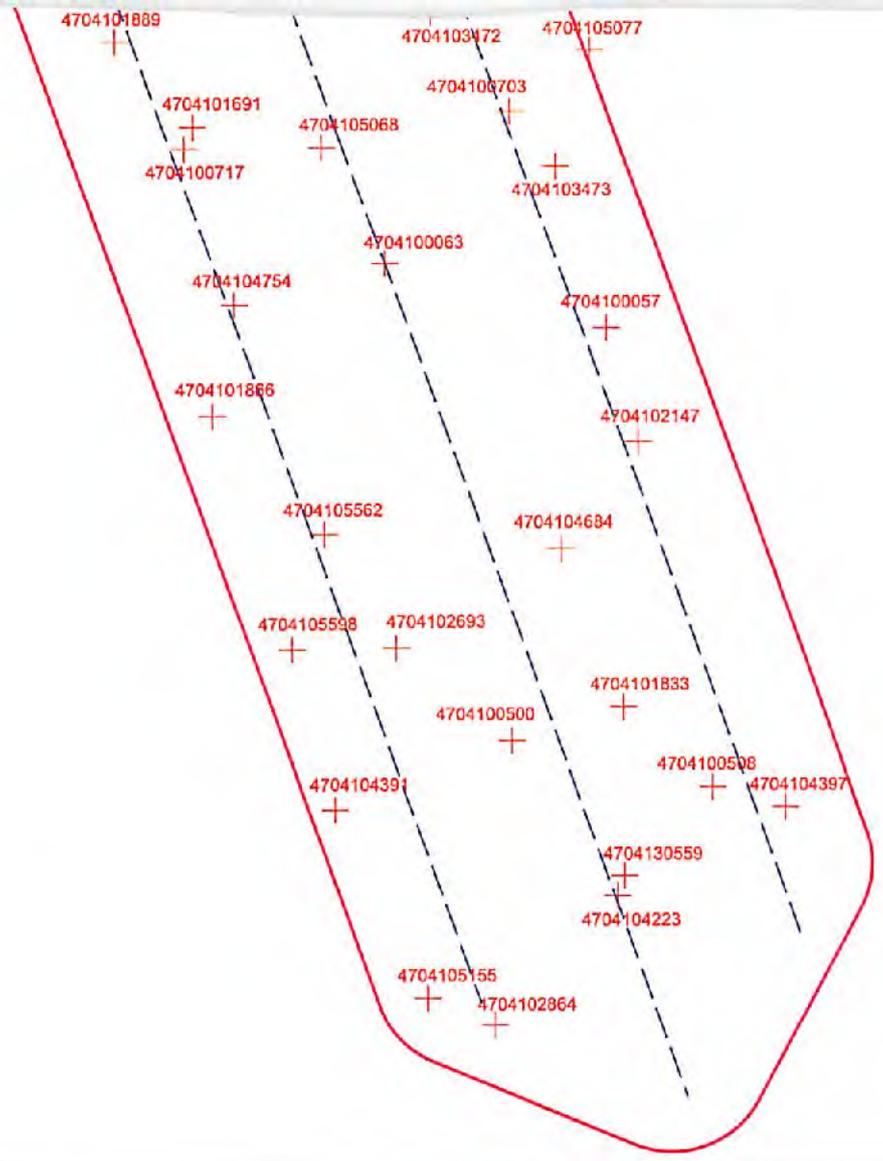
4704102983 + Conventional Vertical Well

- - - Proposed Horizontal Marcellus Well

See Accompanying Spreadsheets



DATA SOURCES
WVGES Data Set - 2020; WVDEP Website



Area of Review for:

BURNSIDE 1214 SOUTH UNIT

Proposed 1214 S-4H Proposed 1214 S-5H
Proposed 1214 S-6H

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



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

7/1/2021

**EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:
BURNSIDE 1214 SOUTH UNIT AND PROPOSED WELLS S-4H, S-5H & S-6H**

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4704100057	Lewis	J B Lovett	Alliance Petroleum Co. LLC	Oriskany	Gas	6997	ACTIVE	39.081562	-80.505203
2	4704100063	Lewis	J W Kemper	Alliance Petroleum Co. LLC	Benson	Gas	4346	ACTIVE	39.082991	-80.511165
3	4704100215	Lewis	Payne Hall	Dominion Energy Transmission, Inc.	Fifth	Storage	2370	ACTIVE	39.117271	-80.529147
4	4704100216	Lewis	Jonathan W & Helen S Foote	Dominion Energy Transmission, Inc.	Gantz	Storage	1860	ACTIVE	39.116920	-80.525927
5	4704100283	Lewis	J S Hall	Hope Natural Gas Company	Greenland Gap Fm	Gas w/ Oil Show	3008	PLUGGED	39.112220	80.521721
6	4704100500	Lewis	Lyle Randolph	LuRay Land, Inc.	Price Fm & equivs	Gas	1521	PLUGGED	39.072713	-80.507865
7	4704100508	Lewis	Lyle Randolph	LuRay Land, Inc.	not available	not available	-	PLUGGED	39.071679	-80.502419
8	4704100663	Lewis	S Hall	Key Oil Company	Price Fm & equivs	Gas w/ Oil Show	1420	ACTIVE	39.088704	-80.510938
9	4704100703	Lewis	S Hall	Key Oil Company	Up Devonian	Dry w/ O&G Show	1967	ACTIVE	39.086253	-80.507753
10	4704100717	Lewis	S A & C M Hall	Alliance Petroleum Co. LLC	Price Fm & equivs	Gas	1447	ABANDONED	39.085501	-80.516562
11	4704101381	Lewis	James & Lee Ann Hall	Dominion Energy Transmission, Inc.	Price Fm & equivs	Gas	1533	ACTIVE	39.099706	80.525517
12	4704101446	Lewis	S & C Hall	Alamco, Inc.	Undf PRICE blw INJN	Dry w/ Oil Show	1661	PLUGGED	39.089272	-80.520098
13	4704101575	Lewis	James M. Evans	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4548	ACTIVE	39.108789	80.524293
14	4704101658	Lewis	James S. Hall	Dominion Energy Transmission, Inc.	Benson	Oil and Gas	4600	ACTIVE	39.102559	80.526802
15	4704101662	Lewis	N A Lovett	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4400	ACTIVE	39.102342	80.515421
16	4704101666	Lewis	M J Hall	Dominion Energy Transmission, Inc.	Benson	Gas	4551	ACTIVE	39.096499	80.517798
17	4704101690	Lewis	Robert D Hall et al	Alliance Petroleum Co. LLC	Benson	Gas	4215	ACTIVE	39.091809	80.518055
18	4704101691	Lewis	Robert D Hall et al	Alliance Petroleum Co. LLC	Benson	Gas	4451	ACTIVE	39.085964	-80.516321
19	4704101704	Lewis	Equitable Gas Co	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4500	ACTIVE	39.103372	80.522098
20	4704101833	Lewis	Lott Hall	Greylock Conventional, LLC	Benson	Gas	4300	ACTIVE	39.073420	-80.504838
21	4704101847	Lewis	Joseph S Hall	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4556	ACTIVE	39.117078	80.519385
22	4704101866	Lewis	F M McKinley	Clem Energy, LLC	Helderberg	Gas	7325	ACTIVE	39.079729	-80.515877
23	4704101889	Lewis	S A & C M Hall	Mountain V, LLC	Helderberg	Gas w/ Oil Show	7140	ACTIVE	39.087821	-80.518423
24	4704101929	Lewis	Jonathan W/Helen S Foote	Dominion Energy Transmission, Inc.	Benson	Oil and Gas	4450	ACTIVE	39.116585	-80.527939
25	4704101947	Lewis	Charles Hall	Mountain V, LLC	Benson	Gas	4260	ACTIVE	39.089127	-80.514702
26	4704102075	Lewis	F McKinley	Mountain V, LLC	Benson	Gas	4360	ACTIVE	39.092872	80.510731
27	4704102147	Lewis	J B Lovett	Alliance Petroleum Co. LLC	Benson	Gas	4519	ACTIVE	39.079120	-80.504372
28	4704102305	Lewis	M C Burnside	Dominion Energy Transmission, Inc.	Fifth	Gas	2192	PLUGGED	39.109536	80.515439
29	4704102306	Lewis	Laura H Evans	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas w/ Oil Show	4511	ACTIVE	39.106891	80.519384
30	4704102330	Lewis	A Brown	Ross & Wharton Gas Co. Inc.	not available	not available	-	ABANDONED	39.104499	-80.519545
31	4704102343	Lewis	F McKinley	Alliance Petroleum Co. LLC	Fifth	Gas	2260	ABANDONED	39.093622	-80.514331
32	4704102373	Lewis	A McKinley	Alliance Petroleum Co. LLC	Hampshire Grp	Gas	2500	ABANDONED	39.094782	-80.515820
33	4704102374	Lewis	F McKinley	Alliance Petroleum Co. LLC	Hampshire Grp	Gas	2182	ABANDONED	39.090141	80.515956
34	4704102537	Lewis	C E Stout	Enervest Operating LLC	Bradford	Gas	3472	ACTIVE	39.102416	80.518734
35	4704102568	Lewis	C E Stout	Enervest Operating LLC	Greenland Gap Fm	Gas	3533	ACTIVE	39.105883	80.514124
36	4704102620	Lewis	J S Hall	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.117158	80.523002

37	4704102693	Lewis	Lot Hall	Ross & Wharton Gas Co. Inc.	Gantz	Gas	2268	ACTIVE	39.074725	-80.510978
38	4704102708	Lewis	N A Lovett	UNKNOWN	Gantz	Gas	2187	ABANDONED	39.099662	80.520152
39	4704102711	Lewis	Franklin McKinney	Alliance Petroleum Co. LLC	Big Lime	Gas	1542	ACTIVE	39.094057	-80.509864
40	4704102748	Lewis	Geo McKinley	UNKNOWN	not available	not available	-	ABANDONED	39.089127	-80.515818
41	4704102864	Lewis	David D Dunmire	Petroleum Service Partners, Inc.	Benson	Gas	4956	ACTIVE	38.944343	-80.612552
42	4704103472	Lewis	James S Wilson et ux	Key Oil Co.	Benson	Gas	4309	ACTIVE	39.088402	-80.509863
43	4704103473	Lewis	James S Wilson et ux	Key Oil Co.	Benson	Gas	4628	ACTIVE	39.085066	-80.506513
44	4704103711	Lewis	John L Burnside	Dominion Energy Transmission, Inc.	Benson	Oil and Gas	4621	ACTIVE	39.107689	-80.529411
45	4704103854	Lewis	Bernard B Jerden	Enervest Operating LLC	Brallier	Gas	5809	ACTIVE	39.102357	80.518897
46	4704104089	Lewis	James S Hall	Enervest Operating LLC	Greenland Gap Fm	Gas	4300	ACTIVE	39.098692	80.523398
47	4704104223	Lewis	James E Trapp	Enervest Operating LLC	Greenland Gap Fm	Gas	4262	ACTIVE	39.069359	-80.505023
48	4704104249	Lewis	Blaine Kershner	Dominion Energy Transmission, Inc.	Fifth	Gas	2145	PLUGGED	39.101601	80.520805
49	4704104354	Lewis	James H Hall trst	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4440	ACTIVE	39.098591	80.513032
50	4704104391	Lewis	Johahan R Dodson	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	3475	ACTIVE	39.071244	-80.512651
51	4704104397	Lewis	Jonathan R Dodson	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	3554	ACTIVE	39.071242	-80.500437
52	4704104684	Lewis	Johathan R Dodson	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	3568	ACTIVE	39.076841	-80.506483
53	4704104754	Lewis	Norma J Gall	Alliance Petroleum Co. LLC	Misc Sands-RILY/BNSN	Gas	3485	ACTIVE	39.082121	-80.515258
54	4704105068	Lewis	Norma J Gall	Alliance Petroleum Co. LLC	Misc Sands-BNSN/BRLR	Gas	4310	ACTIVE	39.085501	-80.512840
55	4704105069	Lewis	James R Myers	Alliance Petroleum Co. LLC	Alexander	Gas	4199	ACTIVE	39.090409	80.506963
56	4704105077	Lewis	James R Myers	Alliance Petroleum Co. LLC	Alexander	Gas	4411	ACTIVE	39.087557	80.505577
57	4704105155	Lewis	Dodson Farms LLC	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	3380	ACTIVE	39.067184	-80.510194
58	4704105543	Lewis	James H Hall Trst	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas w/ Oil Show	4576	ACTIVE	39.095668	80.512728
59	4704105557	Lewis	William R Sr & Dixie D Fultineer	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4800	ACTIVE	39.105804	80.525666
60	4704105562	Lewis	National Timber Partners WV 2	Alliance Petroleum Co. LLC	Balltown	Gas w/ Oil Show	3653	ACTIVE	39.077178	-80.512891
61	4704105598	Lewis	National Timber Partners WV 2	Alliance Petroleum Co. LLC	Brallier	Gas	5767	ACTIVE	39.074701	-80.513798
62	4704105658	Lewis	S A Hall	Key Oil Co.	Brallier	Oil and Gas	4408	ACTIVE	39.090150	80.512812
63	4704130141	Lewis	F White	Reserve Gas Co.	not available	not available	-	PLUGGED	39.106384	-80.524385
64	4704130167	Lewis	Boyd Gum	Reserve Gas Co.	Hampshire Grp	Gas	2790	PLUGGED	39.108849	-80.525130
65	4704130188	Lewis	J M Evans Heirs	Hope Natural Gas Company	Hampshire Grp	Gas	2612	PLUGGED	39.108124	-80.526433
66	4704130190	Lewis	J A Burnside	Hope Natural Gas Company	Hampshire Grp	Gas	2354	PLUGGED	39.113245	-80.524946
67	4704130387	Lewis	Thomas G Wright	Hope Natural Gas Company	Hampshire Grp	Gas	2214	PLUGGED	39.090577	-80.512097
68	4704130522	Lewis	R Harvey Hall	Hope Natural Gas Company	Fifth	Gas	2247	PLUGGED	39.093477	-80.516750
69	4704130559	Lewis	Lot Hall	Hope Natural Gas Company	Fifth	Gas	2141	PLUGGED	39.069794	-80.504837

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

YELLOW DENOTES WELL WITH TVD > 4,500'

GREEN DENOTES SURVEYED WELLS

UPDATED 7/1/2023

Cuttings Disposal/Site Water

Cuttings -Haul off Company:

Eap Industries, Inc. DOT # 0876278
1575 Smith Two State Rd. Atlasburg, PA 15004
1-888-294-5227

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

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

Disposal Locations:

Apex Environmental, LLC Permit # 06-08438
11 County Road 7B
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 #R30-079001 05-2010
4301 Sycamore Ridge Road
Hurricane, WV 25526
304-562-2611

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

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

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

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

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

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

Brooke County Landfill Permit # SWP-103-07 / WV 0109029
Rd 2 Box 410
Colliers, 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-73006-124
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
330-586-6825

Adams #1 (Buckeye Brine, LLC)
Permit # 34-031-2-7177
23986 Airport Road
Coshoccon, 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 Rta. 286 Hwy. E, Suite 303
Indiana, PA 15701

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

Equipment Transport
1 Tyler Court
Carlisle, PA 17015

Myers Well Service, _____
2001 Ballpark Court
Export, PA 15622

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
740-796-8495

02/04/2022

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
412-329-7275

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 Mame Rd. NE
Newark, OH 43055
740-763-3966

02/04/2022

HG Energy II Appalachia, LLC

Site Safety Plan

Burnside 1214 Well Pad
Weston
Lewis County, WV 26452

October 2020: 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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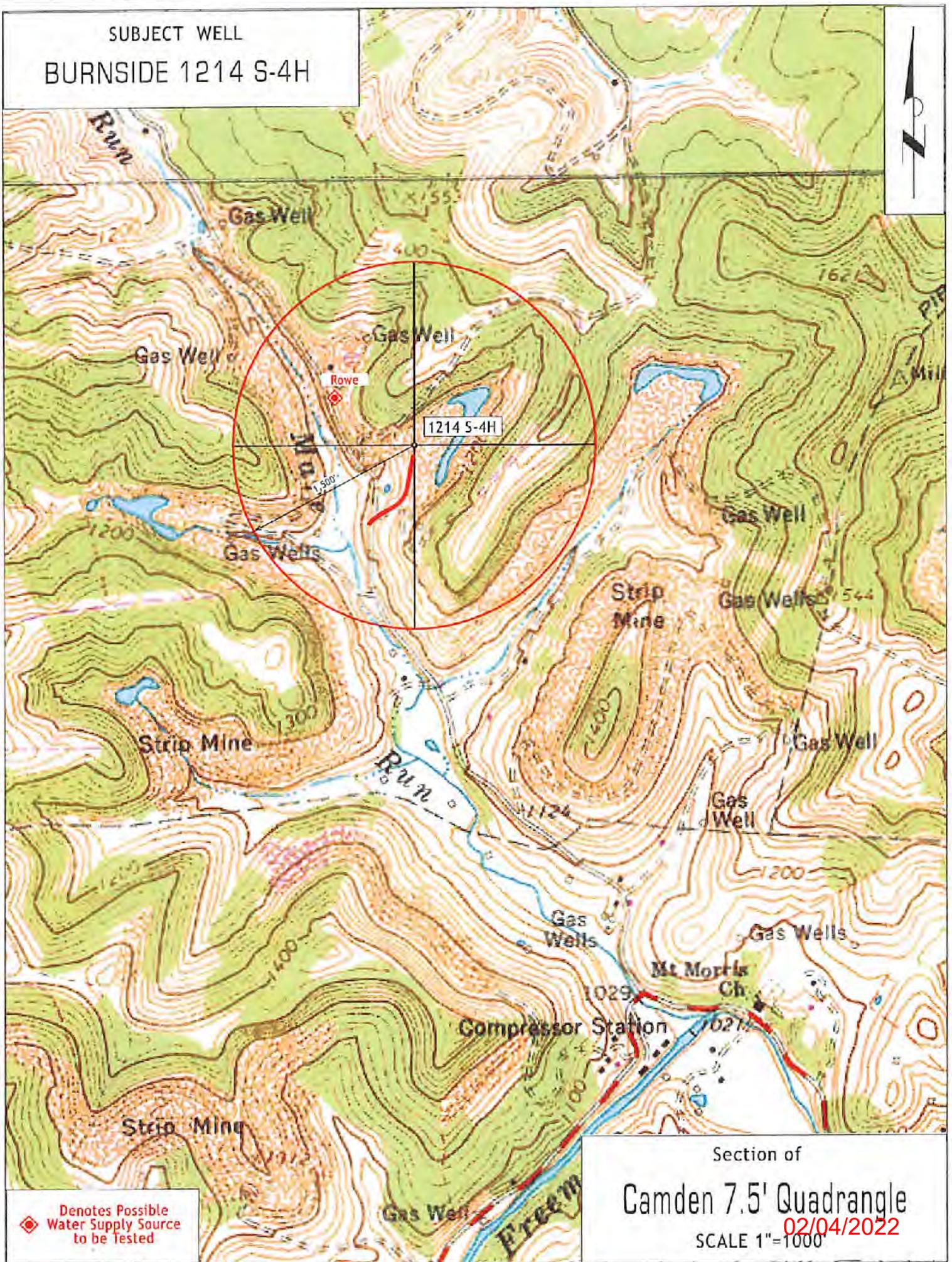
NOV 09 2020

WV Department of
Environmental Protection

B.S. 10-22-20

02/04/2022

SUBJECT WELL
BURNSIDE 1214 S-4H



Denotes Possible
Water Supply Source
to be Tested

Section of
Camden 7.5' Quadrangle
02/04/2022
SCALE 1"=1000'

2,547' to Bottom Hole

6,556' to Top Hole

TOP LATITUDE 39 - 07 - 30
BTM LATITUDE 39 - 05 - 00

BTM LONGITUDE 80 - 30 - 00
TOP LONGITUDE 80 - 30 - 00

2,206' to Top Hole

5,909' to Bottom Hole

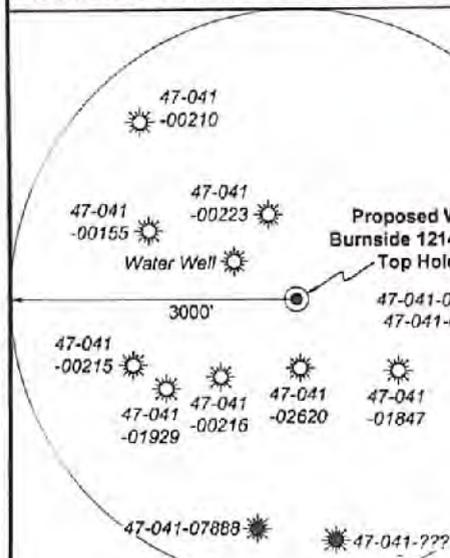
Page 1 of 2
HG Energy II Appalachia, LLC
Well No. Burnside 1214 S-4H MOD

Notes:
Well No. Burnside 1214 S-4H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,206,317.94'
E: 1,775,721.61'
Landing Point Coordinates
N: 14,205,095.34'
E: 1,773,604.89'
Bottom Hole Coordinates
N: 14,187,466.22'
E: 1,779,834.36'

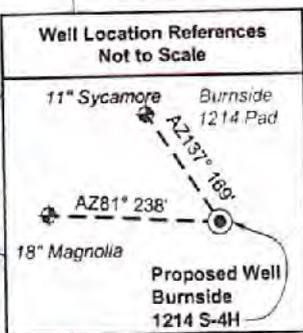
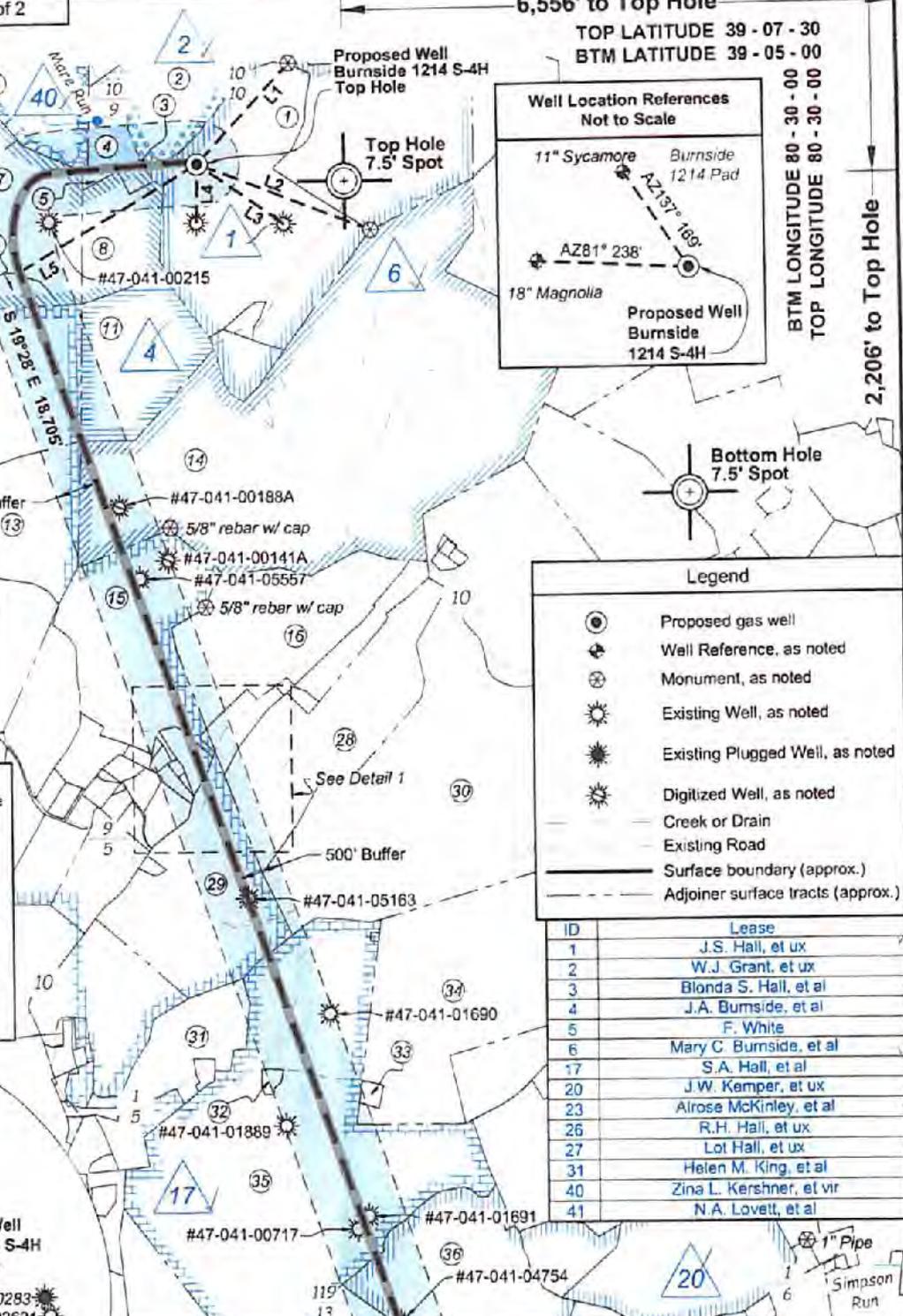


Tag	Bearing	Dist.	Description
L1	S 42°51' W	1,815.4'	Threaded Pipe
L2	N 68°52' W	2,183.3'	Gate Post
L3	N 55°02' W	1,232.3'	#47-041-01847
L4	N 01°22' E	682.3'	#47-041-02620
L5	S 59°59' W	2,444.4'	Landing point

Notes: Well No. Burnside 1214 S-4H
West Virginia Coordinate System of 1927, North Zone
based upon Differential GPS Measurements.
Top Hole coordinates Bottom Hole coordinates
Latitude: 39°07'08.19" Latitude: 39°04'01.57"
Longitude: 80°31'23.21" Longitude: 80°30'32.31"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,330,094.412m N: 4,324,348.396m
E: 541,241.033m E: 542,494.603m
Plat orientation and corner and well references are
based upon the grid north meridian. Well location
references are based upon the magnetic meridian.



Note: 1 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.)

ID	Lease
1	J.S. Hall, et ux
2	W.J. Grant, et ux
3	Blonda S. Hall, et al
4	J.A. Burnside, et al
5	F. White
6	Mary C. Burnside, et al
17	S.A. Hall, et al
20	J.W. Kemper, et ux
23	Airose McKinley, et al
26	R.H. Hall, et ux
27	Lot Hall, et ux
31	Helen M. King, et al
40	Zina L. Kershner, et vir
41	N.A. Lovett, et al

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

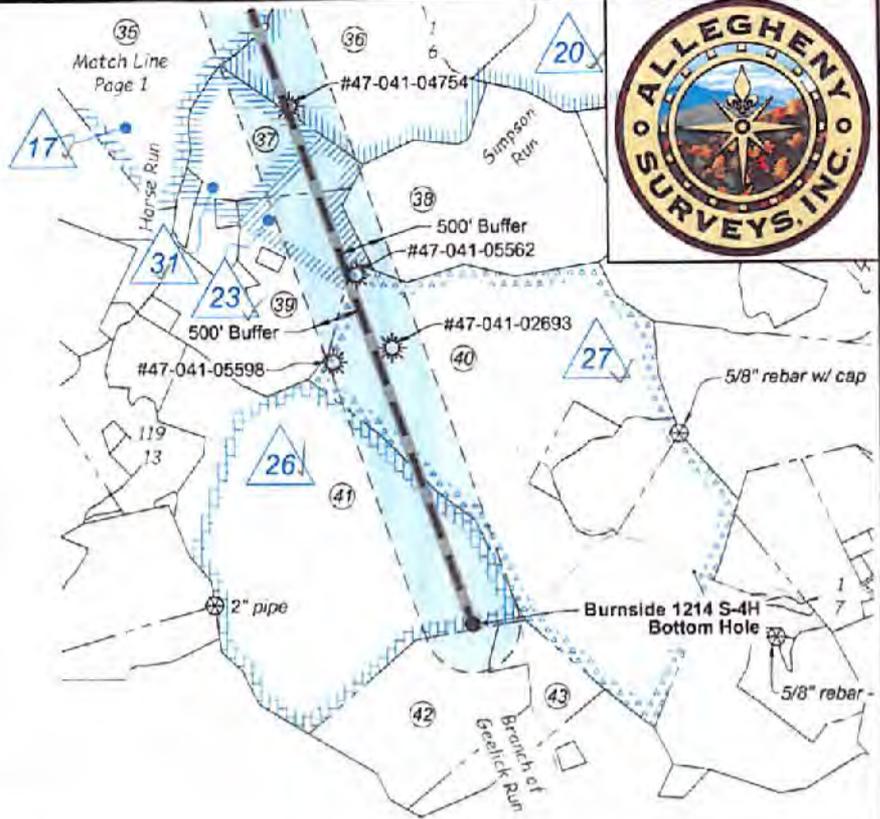


FILE NO: 236-36-12-19
DRAWING NO: Burnside 1214 S-4H Well Plat
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

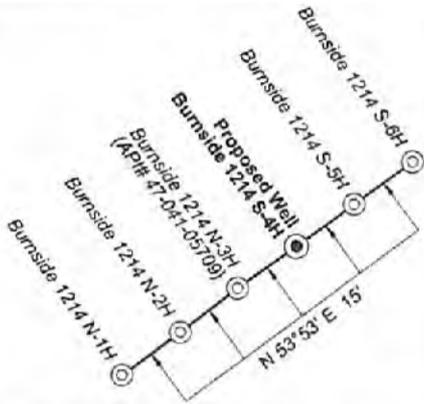
STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: December 13 2021
OPERATOR'S WELL NO. Burnside 1214 S-4H
API WELL NO
47 - 041 - 05729
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1159.2' WATERSHED: Middle West Fork Creek
DISTRICT: Freemans Creek QUADRANGLE: Camden
SURFACE OWNER: John K. Burnside, et al COUNTY: Putnam
ROYALTY OWNER: J.S. Hall, et ux, et al LEASE NO: ACREAGE: 115.00
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD-Curve
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,693' 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

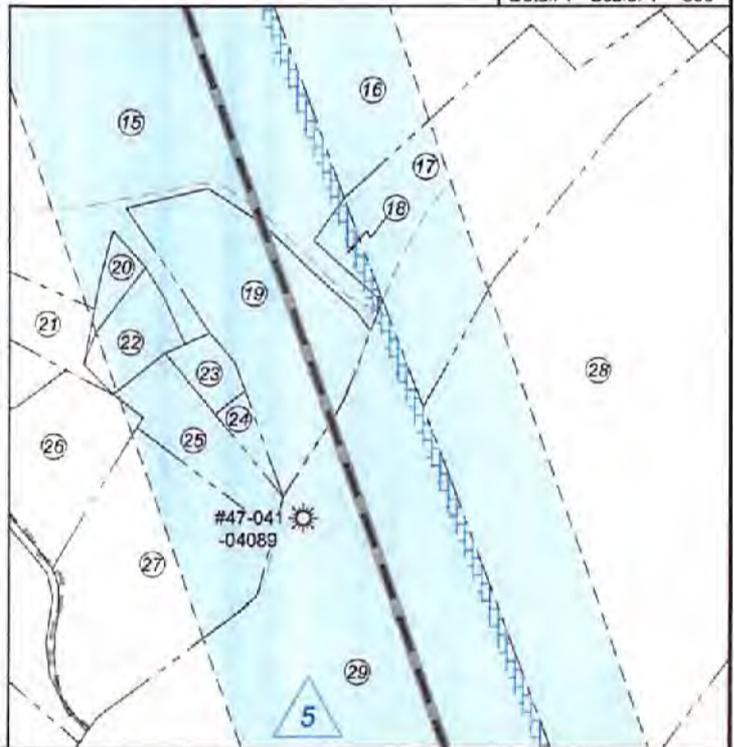


Wellhead Layout (NTS)



Lewis Co. - Freeman Creek Dist.				
No.	TM / Par	Owner	Bk / Pg	Ac.
1	6C / 3.2	John K. Burnside, et al	666 / 44	115.00
2	5C / 34	Karina K. Rowe	572 / 209	42.00
3	5C / 41.1	Mike Ross, Inc. and Waco Oil & Gas	676 / 133	2.09
4	5C / 35	Robert S. Gtofelly	339 / 241	14.77
5	5C / 36	Phillip E. Burnside	766 / 831	0.71
6	5C / 32	Robert S. Gtofelly	399 / 241	94.40
7	5C / 37	Phillip E. Burnside	766 / 831	83.75
8	5C / 41	Phillip E. Burnside	766 / 831	23.90
9	5C / 40	Phillip E. Burnside, et al	666 / 503	6.50
10	5C / 39	Phillip E. Burnside, et al	666 / 503	47.00
11	5C / 44	John K. & Reta L. Burnside	631 / 778	51.00
12	5C / 45	Phillip E. Burnside	666 / 503	121.42
13	5C / 46	Phillip E. Burnside	666 / 503	60.00
14	6C / 4	James M. Evans III, et al	657 / 228	294.00
15	5D / 60	William R. Fultineer, et al	627 / 496	74.71
16	6C / 5	Equitable Gas	216 / 185	65.55
17	5D / 63	Donald R. & Pamela J. Spinks	574 / 573	8.00
18	5D / 62	Donald R. & Pamela J. Spinks	574 / 573	0.34
19	5D / 60.10	William & Dixie Fultineer	591 / 48	5.02
20	5D / 60.17	Jason & Mandy Starcher	677 / 696	0.38
21	5D / 60.18	Edward Brightbill & Vicki A. Harper	750 / 120	1.23
22	5D / 60.16	Jason & Mandy Starcher	677 / 696	1.00
23	5D / 61.1	Randall & Agnes Starcher	440 / 500	0.52
24	5D / 60.8	Marie L. Sprouse	W9 / 190	0.31
25	5D / 61	Lillie M. Sprouse	W9 / 190	1.86
26	5D / 60.15	Jeremy Bruffey	715 / 454	2.86
27	5D / 60.14	Jeremy Bruffey	715 / 454	5.86
28	6D / 2	Robert L. & Lindsey R. Rittenhouse	691 / 794	74.75
29	5D / 59	James H. Hall Trust	199 / 488	73.25
30	6D / 3	James H. Hall Trust	WB H / 147	194.50
31	5D / 57	John Thomas Garrett, et al	728 / 296	28.70
32	5D / 68	Sue Ellen Hall	W34 / 597	1.33
33	6D / 5.1	Brooks D. & Mary L. Hall	361 / 739	1.51
34	6D / 5	David B. & Wendall S. Hall	W29 / 176	196.50
35	6D / 10	Sue E. Hall & Alice J. Fisher	W34 / 597	252.44
36	6D / 12	Bradford & Michelle Taylor	762 / 891	77.00
37	6E / 1	Bruce S. Kimmel	721 / 678	42.70
38	6E / 12	James E. Gray, et al	735 / 51	90.50
39	6E / 1.7	Patricia A. & Joel S. Harris	721 / 670	61.20
40	6E / 11.1	Heartwood Forestland Fund VII	666 / 124	235.87
41	6E / 4	Heartwood Forestland Fund VII	666 / 124	171.06
42	6E / 10	Heartwood Forestland Fund VII	666 / 124	51.75
43	6E / 9	Heartwood Forestland Fund VII	666 / 124	28.00

Detail 1 - Scale: 1" = 500'



FILE NO: 236-36-12-19
DRAWING NO: Burnside 1214 S-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: December 13 20 21
OPERATOR'S WELL NO. Burnside 1214 S-4H
API WELL NO
47 - 041 - 05729
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1159.2' WATERSHED: Middle West Fork Creek

DISTRICT: Freemans Creek

SURFACE OWNER: John K. Burnside, et al

ROYALTY OWNER: J.S. Hall, et ux, et al

LEASE NO: _____ ACREAGE: 214.08

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

PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 26,791' MD 6,693' 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

QUADRANGLE: Camden
COUNTY: Putnam
ACREAGE: 115.00

02/04/2022

2,547' to Bottom Hole

6,556' to Top Hole

TOP LATITUDE 39 - 07 - 30
BTM LATITUDE 39 - 05 - 00

BTM LONGITUDE 80 - 30 - 00
TOP LONGITUDE 80 - 30 - 00
2,206' to Top Hole
5,909' to Bottom Hole

HG Energy II Appalachia, LLC
Well No. Burnside 1214 S-4H MOD

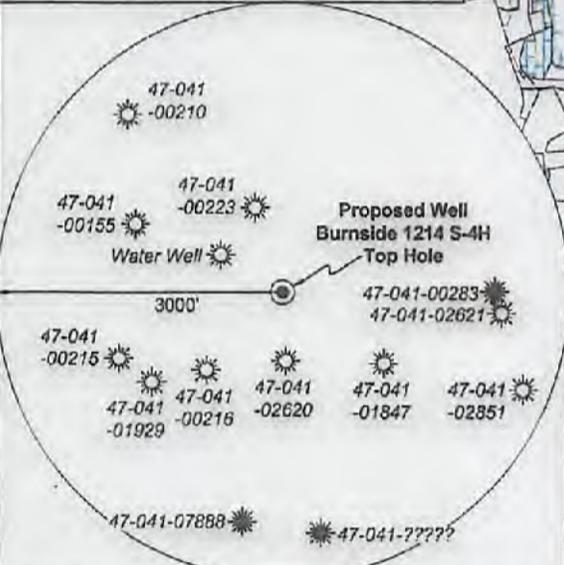
Page 1 of 2

Notes:
Well No. Burnside 1214 S-4H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,206,317.94'
E: 1,775,721.61'
Landing Point Coordinates
N: 14,205,095.34'
E: 1,773,604.89'
Bottom Hole Coordinates
N: 14,187,466.22'
E: 1,779,834.36'



Tag	Bearing	Dist.	Description
L1	S 42°51' W	1,615.4'	Threaded Pipe
L2	N 68°52' W	2,183.3'	Gate Post
L3	N 55°02' W	1,232.3'	#47-041-01847
L4	N 01°22' E	682.3'	#47-041-02620
L5	S 59°59' W	2,444.4'	Landing point

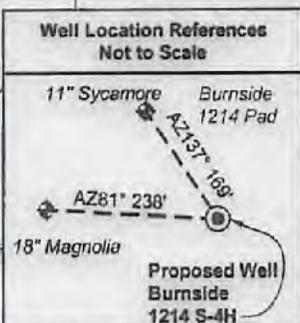
Notes: Well No. Burnside 1214 S-4H
West Virginia Coordinate System of 1927, North Zone
based upon Differential GPS Measurements.
Top Hole coordinates Latitude: 39°07'08.19" Longitude: 80°31'23.21"
Bottom Hole coordinates Latitude: 39°04'01.57" Longitude: 80°30'32.31"
UTM Zone 17, NAD 1983
Top Hole Coordinates N: 4,330,094.412m E: 541,241.033m
Bottom Hole Coordinates N: 4,324,348.396m E: 542,494.603m
Plat orientation and corner and well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.



Note: 1 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.

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



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.)

ID	Lessee
1	J.S. Hall, et ux
2	W.J. Grant, et ux
3	Blonda S. Hall, et al
4	J.A. Burnside, et al
5	F. White
6	Mary C. Burnside, et al
17	S.A. Hall, et al
20	J.W. Kemper, et ux
23	Airose McKinley, et al
26	R.H. Hall, et ux
27	Lot Hall, et ux
31	Helen M. King, et al
40	Zina L. Kershner, et vir
41	N.A. Lovell, et al

FILE NO: 236-36-12-19
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PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

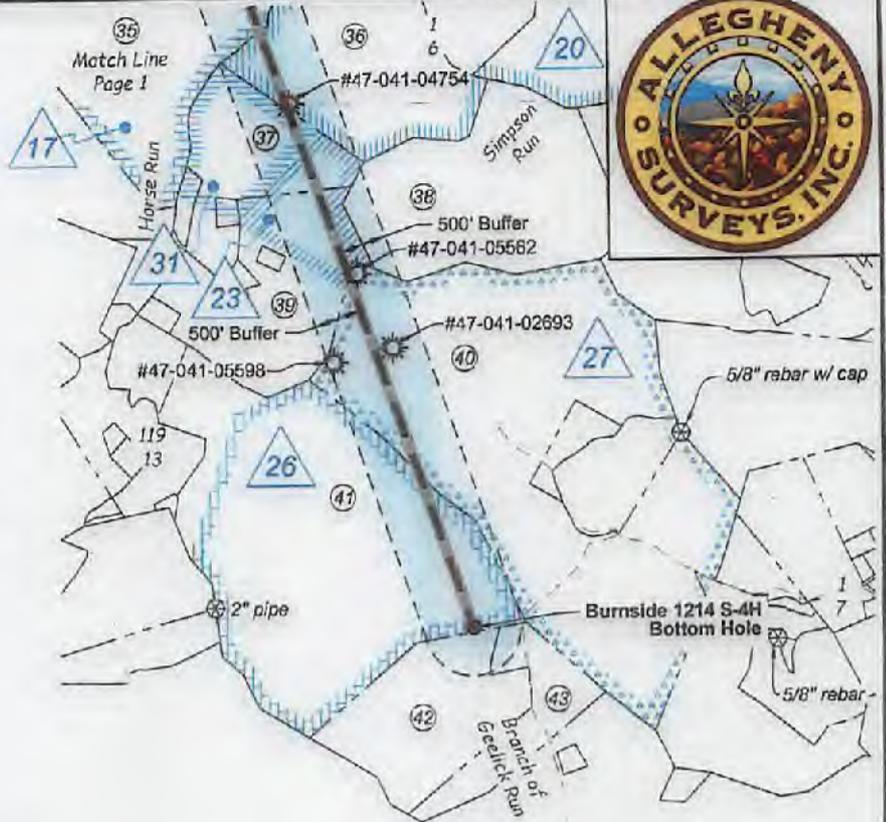
STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: December 13 2021
OPERATOR'S WELL NO. Burnside 1214 S-4H
API WELL NO. 46A
47 - 041 - 05729
STATE COUNTY PERMIT

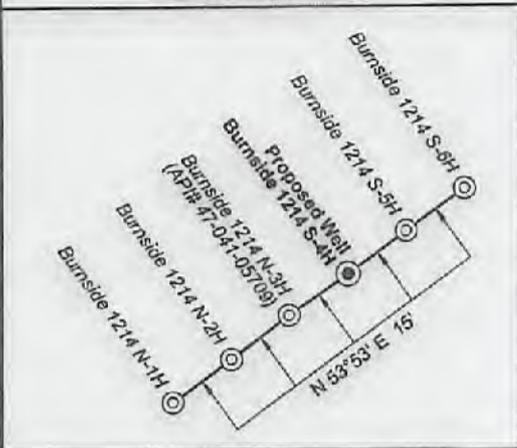
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1159.2' WATERSHED: Middle West Fork Creek
DISTRICT: Freemans Creek
SURFACE OWNER: John K. Burnside, et al
ROYALTY OWNER: J.S. Hall, et ux, et al LEASE NO: ACREAGE: 214.08
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD-Curve 6,693' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 26,791' 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

02/04/2022



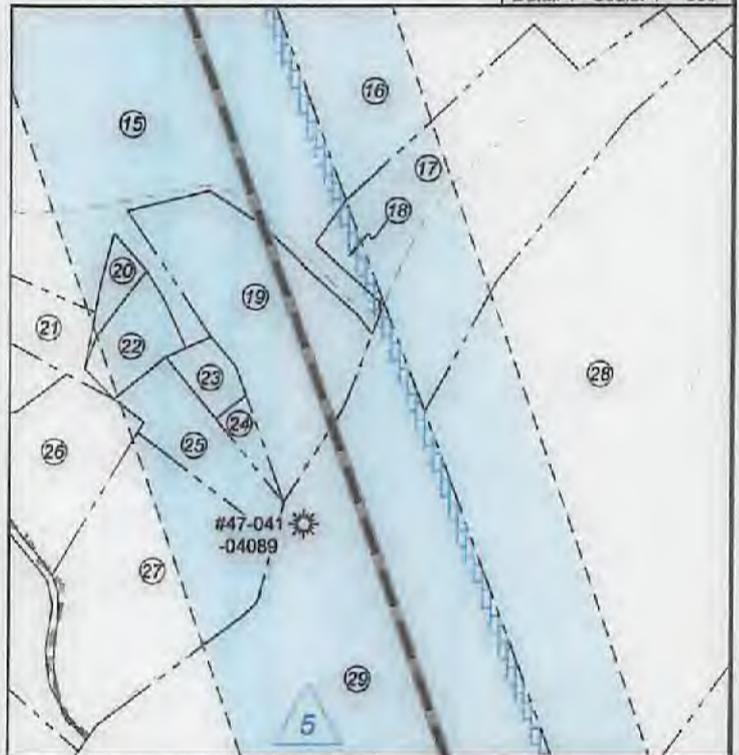
Wellhead Layout (NTS)



Lewis Co. - Freeman Creek Dist.

No.	TM / Par	Owner	Bk / Pg	Ac.
1	6C / 3.2	John K. Burnside, et al	666 / 44	115.00
2	5C / 34	Karina K. Rowe	572 / 209	42.00
3	5C / 41.1	Mike Ross, Inc. and Waco Oil & Gas	676 / 133	2.09
4	5C / 35	Robert S. Grotfelty	339 / 241	14.77
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16	6C / 6	Equitable Gas	216 / 185	66.55
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18	5D / 62	Donald R. & Pamela J. Spinks	574 / 573	0.34
19	5D / 60.10	William & Dixie Fullineer	591 / 48	5.02
20	5D / 60.17	Jason & Mandy Starcher	677 / 696	0.38
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24	5D / 60.8	Marie L. Sprouse	W9 / 190	0.31
25	5D / 61	Lillie M. Sprouse	W9 / 190	1.66
26	5D / 60.15	Jeremy Bruffey	715 / 454	2.86
27	5D / 60.14	Jeremy Bruffey	715 / 454	5.86
28	6D / 2	Robert L. & Lindsey R. Rittenhouse	691 / 794	74.75
29	5D / 59	James H. Hall Trust	199 / 488	73.25
30	6D / 3	James H. Hall Trust	WB H / 147	194.50
31	5D / 57	John Thomas Garrett, et al	728 / 296	28.70
32	5D / 68	Sue Ellen Hall	W34 / 597	1.33
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34	6D / 5	David B. & Wendall S. Hall	W29 / 176	196.50
35	6D / 10	Sue E. Hall & Alice J. Fisher	W34 / 597	252.44
36	6D / 12	Bradford & Michelle Taylor	782 / 891	77.00
37	6E / 1	Bruce S. Kimmel	721 / 878	42.70
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39	6E / 1.7	Patricia A. & Joel S. Harris	721 / 670	61.20
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42	6E / 10	Heartwood Forestland Fund VII	666 / 124	51.75
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Detail 1 - Scale: 1" = 500'



FILE NO: 236-36-12-19

DRAWING NO: Burnside 1214 S-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: December 13 2021

OPERATOR'S WELL NO. Burnside 1214 S-4H

API WELL NO. HGA-

47 - 041 - 05729

STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1159.2' WATERSHED: Middle West Fork Creek

QUADRANGLE: Camden

DISTRICT: Freemans Creek

COUNTY: Lewis

SURFACE OWNER: John K. Burnside, et al

ACREAGE: 214.00

ROYALTY OWNER: J.S. Hall, et ux, et al

LEASE NO: _____ ACREAGE: 214.00

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
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PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 26,791' MD

WELL OPERATOR: HG Energy II Appalachia, LLC

DESIGNATED AGENT: Diane C. White

ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101

ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101

WW-6A1
(5/13)

Operator's Well No. Burnside 1214 S-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

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 II Appalachia, LLC - Burnside 1214 S4H

1214S Tract	LEGACY LEASE NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE
1	FK053143	03-006C-0003-0000 03-006C-0003-0001 03-005C-0042-0000	Q101021000	J. S. HALL AND CORA A. HALL, HIS WIFE	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	42	94
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	85	127
				HOPE NATURAL GAS COMPANY	RESERVE GAS COMPANY	ASSIGNMENT	79	370
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM 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	
				2	FK061776	03-005C-0034-0000	Q100936000	W. J. GRANT AND ADDIE J. GRANT, HIS WIFE
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					
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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
3	FK064784	03-005C-0037-0000 03-005C-0040-0000 03-005C-0041-0000	Q101057000					BLONDA S. HALL AND LUCY S. HALL, HIS WIFE; JAMES H. HALL AND PATRICIA HALL, HIS WIFE; MABEL HALL, WIDOW; MARJORIE HALL COSBY AND ROBERT S. COSBY, JR., HER HUSBAND; ROBERTA HALL STEPHENS AND CHARLES H. STEPHENS, HER HUSBAND; MABEL JANE HALL GIBBS; AND, HERBERT F. GIBBS, JR., HER HUSBAND
				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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				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	
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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 p/o 03-005C-0022-0001 p/o 03-005C-0025-0000 p/o 03-005C-0027-0002 03-005C-0045-0000 03-005C-0046-0000 03-005D-0020-0000 p/o 03-005D-0035-0000 p/o 03-005D-0036-0000 03-005D-0036-0001 03-005D-0036-0002 03-005D-0037-0000 03-005D-0038-0000 03-005D-0060-0000 03-005D-0060-0001 THRU 03-005D-0060-0015 03-005D-0061-0000 03-005D-0061-0001 03-005D-0062-0000	Q100333000	F. WHITE	SOUTHERN OIL COMPANY	NOT LESS THAN 1/8	40	62
				T. N. BARNSDALL, SOUTHERN OIL COMPANY, AND FRED S. RICH	RESERVE GAS COMPANY	ASSIGNMENT	85	106
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM 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
4	FK064266	03-005C-0044-0000	Q100978000	J. A. BURNSIDE AND BLANCHE BURNSIDE, HIS WIFE; J. S. HALL, WIDOWER; AND CLAYTON HALL AND NADINE HALL, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	220	307
				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
				MARY C. BURNSIDE AND JOHN L. BURNSIDE, HER HUSBAND	A. W. WOODFORD AND GEO. E. MCGUIRE	NOT LESS THAN 1/8	33	431
				A. W. WOODFORD	J. M. GUFFEY AND J. H. GALEY	ASSIGNMENT	33	515
				J. M. GUFFEY AND J. H. GALEY	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	44	583
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	THE PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125	379
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	THE PITTSBURGH AND WEST VIRGINIA GAS COMPANY	DEED	125	371
				THE PITTSBURGH AND WEST VIRGINIA GAS COMPANY	EQUITABLE GAS COMPANY	DEED	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

6	FK052229	03-005C-0043-0000 03-006C-0004-0000	Q100759000	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	
17	DAD41528	03-006D-0010-0000 03-005D-0068-0000 03-006D-0010-0002	DAD41528	S. A. HALL AND GEORGIA E. HALL, HIS WIFE; AND CLAUDE M. HALL AND NELLE HALL, HIS WIFE	ALLEGHENY LAND AND MINERAL COMPANY	NOT LESS THAN 1/8	258	541	
				ALLEGHENY LAND AND MINERAL COMPANY	ALLEGHENY LAND AND MINERAL COMPANY	CONFIRMATORY DEED	401	538	
				ALLEGHENY LAND AND MINERAL COMPANY	Alamco, Inc.	MERGER/NAME CHANGE	457	667	
				Alamco, Inc.	UMC Petroleum Corporation	ASSIGNMENT	519	24	
				UMC Petroleum Corporation	Ashland Exploration Holdings, Inc.	ASSIGNMENT	525	557	
				Ashland Exploration Holdings, Inc.	Eastern States Oil and Gas, Inc.	ASSIGNMENT	546	207	
				Eastern States Oil and Gas, Inc.	Blazer Energy Corp.	MERGER/NAME CHANGE	WVSOS		
				Blazer Energy Corp.	Equitable Production - Eastern States, Inc.	MERGER/NAME CHANGE	WVSOS		
				Equitable Production - Eastern States, Inc.	Equitable Production Company	MERGER/NAME CHANGE	WVSOS		
				Equitable Production Company	EQT Production Company	MERGER/NAME CHANGE	WVSOS		
				EQT PRODUCTION COMPANY	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	770	560	
20		03-006D-0011-0000 03-006D-0012-0000 03-006D-0017-0000 03-006D-0017-0001		J. W. KEMPER SR. AND H. S. KEMPER, HIS WIFE	RESERVE GAS COMPANY	NOT LESS THAN 1/8	68	268	
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	MERGER/NAME CHANGE	155	202	
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89	
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127	
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS		
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS		
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION INC.	CONFIRMATORY ASSIGNMENT	620	139	
				DOMINION EXPLORATION & PRODUCTION INC	DOMINION TRANSMISSION, INC.	ASSIGNMENT	651	137	
				DOMINION APPALACHIAN DEVELOPMENT LLC	DOMINION TRANSMISSION, INC.	ASSIGNMENT OF HYDROCARBON LEASES	651	225	
				DOMINION TRANSMISSION, INC.	CONSOL ENERGY HOLDINGS LLC XVI	ASSIGNMENT	651	318	
				CONSOL ENERGY HOLDINGS LLC XVI	CONSOL GAS COMPANY	MERGER/NAME CHANGE	9	471	
CONSOL GAS COMPANY	CNX GAS COMPANY LLC	MERGER/NAME CHANGE	9	471					
CNX GAS COMPANY LLC	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	766	352					
31	111970000	p/o 03-006E-0001-0000 p/o 03-006E-0001-0006 p/o 03-006E-0001-0009	CNX111970000	HELEN M. KING ET AL	CONSOLIDATED GAS SUPPLY CORPORATION	NOT LESS THAN 1/8	314	34	
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127	
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG DEVELOPMENT COMPANY	ASSIGNMENT	432	633	
				CNG DEVELOPMENT COMPANY	CNG PRODUCING COMPA+C122:F130NY	MERGER/NAME CHANGE	WVSOS		
				CNG PRODUCING COMPANY	DOMINION EXPLORATION & PRODUCTION INC.	MERGER/NAME CHANGE	58	366	
				DOMINION APPALACHIAN DEVELOPMENT LLC	DOMINION TRANSMISSION, INC.	ASSIGNMENT	651	225	
				DOMINION TRANSMISSION, INC.	CONSOL ENERGY HOLDINGS LLC XVI	ASSIGNMENT	651	318	
				CONSOL ENERGY HOLDINGS LLC XVI	CNX GAS COMPANY LLC	MERGER/NAME CHANGE	9	471	
				CONSOL GAS COMPANY	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	766	352	
				CNX GAS COMPANY LLC					
				23	112544000	p/o 03-006E-0001-0000 03-006E-0001-0001 03-006E-0001-0006 03-006E-0001-0007	CNX112544000	ALROSE MCKINLEY, DIVORCED; MARIAN MCKINLEY CHALFANT AND B. Y. CHALFANT, HER HUSBAND; LORRAINE MCKINLEY BLACKWOOD, WIDOW	CONSOLIDATED GAS SUPPLY CORPORATION
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425					127	
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG DEVELOPMENT COMPANY	ASSIGNMENT	432					633	
CNG DEVELOPMENT COMPANY	CNG PRODUCING COMPANY	MERGER/NAME CHANGE	WVSOS						
CNG PRODUCING COMPANY	DOMINION EXPLORATION & PRODUCTION INC.	MERGER/NAME CHANGE	58					366	

				DOMINION APPALACHIAN DEVELOPMENT LLC	DOMINION TRANSMISSION, INC.	ASSIGNMENT	651	225	
				DOMINION TRANSMISSION, INC.	CONSOL ENERGY HOLDINGS LLC XVI	ASSIGNMENT	651	318	
				CONSOL ENERGY HOLDINGS LLC XVI	CNX GAS COMPANY LLC	MERGER/NAME CHANGE	9	471	
				CNX GAS COMPANY LLC	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	766	352	
✓	26	53244	03-006E-0011-0000 03-006E-0011-0001 03-006E-0011-0002	CNX053244 AGREEMENT 131356000	R. H. HALL, ET UX	RESERVE GAS COMPANY	NOT LESS THAN 1/8	68	278
					RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
					HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
					CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
					CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
					CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
					CNG DEVELOPMENT COMPANY	CNG PRODUCING COMPANY	MERGER/NAME CHANGE	WVSOS	
					CNG PRODUCING COMPANY	DOMINION EXPLORATION & PRODUCTION INC.	MERGER/NAME CHANGE	58	366
					DOMINION EXPLORATION & PRODUCTION INC	DOMINION TRANSMISSION INC	ASSIGNMENT	651	137
					DOMINION APPALACHIAN DEVELOPMENT LLC	DOMINION TRANSMISSION, INC.	ASSIGNMENT	651	225
					DOMINION TRANSMISSION INC	CONSOL ENERGY HOLDINGS LLC XVI	ASSIGNMENT	651	318
					CONSOL ENERGY HOLDINGS LLC XVI	CONSOL GAS COMPANY	MERGER/NAME CHANGE	WVSOS	
					CONSOL GAS COMPANY	CNX GAS COMPANY LLC	MERGER/NAME CHANGE	9	471
					CONSOL GAS COMPANY	CNX GAS COMPANY LLC	MERGER/NAME CHANGE	WVSOS	
					CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
					NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
✓	27	53107	03-006E-0004-0000	CNX053107 AGREEMENT 131324000	LOT HALL AND BIRD HALL,HISWIFE	EASTERN OIL COMPANY	NOT LESS THAN 1/8	40	151
					EASTERN OIL COMPANY	BUCKHANNON GAS COMPANY	ASSIGNMENT	40	578
					BUCKHANNON GAS COMPANY	J.S. GLENN	ASSIGNMENT	85	98
					J.S. GLENN	SOUTHERN OIL COMPANY	ASSIGNMENT	85	98
					SOUTHERN OIL COMPANY	RESERVE GAS COMPANY	ASSIGNMENT	85	106
					RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	158	575
					HOPE NATURAL GAS COMPANY	LURAY LAND INC.	ASSIGNMENT	260	232
					LURAY LAND INC.	CONSOLIDATED GAS SUPPLY CORPORATION	ASSIGNMENT	294	434
					CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
					CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG DEVELOPMENT COMPANY	MERGER/NAME CHANGE	WVSOS	
					CNG DEVELOPMENT COMPANY	CNG PRODUCING COMPANY	MERGER/NAME CHANGE	WVSOS	
					CNG PRODUCING COMPANY	DOMINION EXPLORATION & PRODUCTION INC.	MERGER/NAME CHANGE	58	366
					DOMINION EXPLORATION & PRODUCTION INC	DOMINION TRANSMISSION INC	ASSIGNMENT	651	137
					DOMINION APPALACHIAN DEVELOPMENT LLC	DOMINION TRANSMISSION, INC.	ASSIGNMENT	651	225
					DOMINION TRANSMISSION INC	CONSOL ENERGY HOLDINGS LLC XVI	ASSIGNMENT	651	318
					CONSOL ENERGY HOLDINGS LLC XVI	CONSOL GAS COMPANY	MERGER/NAME CHANGE	WVSOS	
					CONSOL GAS COMPANY	CNX GAS COMPANY LLC	MERGER/NAME CHANGE	9	471
					CONSOL GAS COMPANY	CNX GAS COMPANY LLC	MERGER/NAME CHANGE	WVSOS	
					CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
					NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
✓	40	FK064311	03-005C-0035-0000	Q100856000	ZINA L. KERSHNER AND F. H. KERSHNER,HER HUSBAND	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	221	97
					RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
					HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
					CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
					CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
					CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
					DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM 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
41	FK053161	03-005C-0032-0000 03-005C-0033-0000	Q100334000	N. A. LOVETT AND S. E. A. LOVETT, HIS WIFE	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	42	109
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	85	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
				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



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

4704105729

November 8, 2021

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

RE: Drilling Under Roads – Burnside 1214 S-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 Burnside 1214 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 Burnside 1214 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 White

Diane C. White

Enclosures

02/04/2022

DEC 16 2021

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

GAS Department of
Environmental Protection

Date of Notice Certification: 05/07/2021

API No. 47- _____ - _____

Operator's Well No. Burnside 1214 S-4H

Well Pad Name: Burnside 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>541241.0</u>
County: <u>Lewis</u>		Northing: <u>4330094.4</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>Burnside</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: 40px;"><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:

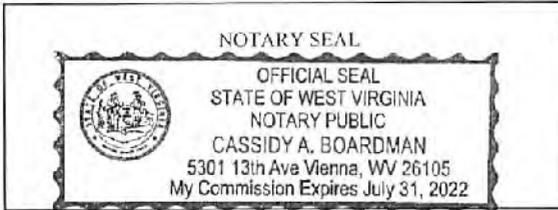
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication 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.

02/04/2022

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 3rd day of May, 2021.

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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DEC 16 2021

WV Department of
Environmental Protection

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: 07/01/21 Date Permit Application Filed: 7/01/21

Notice of:

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

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

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

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

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

SURFACE OWNER(s)
Name: John Kent Burnside (pad, road, water)
Address: 645 Mare Run Road
Weston, WV 26452

Name: Bertha Benedum (pad, road, water)
Address: 604 Mare Run Road
Weston, WV 26452

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

Name: _____
Address: _____

Name: _____
Address: _____

SURFACE OWNER(s) (Impoundments or Pits)

Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: NA
Address: _____

COAL OPERATOR
Name: NA
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: Karina Rowe
Address: 1148 Mare Run Road
Weston, WV 26452

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

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WV Department of
Environmental Protection

*Please attach additional forms if necessary

WW-6A
(8-13)

RECEIVED
Office of Oil and Gas

API NO. 47- -
OPERATOR WELL NO. Burnside 1214-58d
Well Pad Name: Burnside 1214

DEC 16 2021

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the 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

02/04/2022

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: RECEIVED
Office of Oil and Gas

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

DEC 16 2021

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.**

02/04/2022

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.

WW-6A
(8-13)

API NO. 47-_____-_____
OPERATOR WELL NO. Burnside 1214 N1H - 55H
Well Pad Name: Burnside 1214

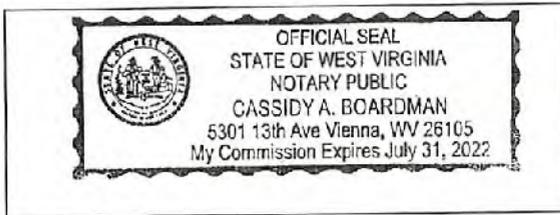
Notice is hereby given by:

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 1st day of July, 2021.

Cassidy Boardman Notary Public

My Commission Expires 7/31/2022

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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

July 1, 2021

John Kent Burnside
645 Mare Run Road
Weston, WV 26452

RE: Burnside 1214 N-1H – S-6H Well Work Permit Applications - Notification
Freemans Creek District, Lewis County
West Virginia

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Office of Oil and Gas

DEC 16 2021

WV Department of
Environmental Protection

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

02/04/2022



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

July 1, 2021

Bertha Benedum
604 Mare Run Road
Weston, WV 26452

RE: Burnside 1214 N-1H to S-6H Well Work Permit Application - Notification
Freemans Creek District, Lewis County
West Virginia

Dear Ms. Rowe:

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

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WV Department of
Environmental Protection

Enclosures

02/04/2022



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

July 1, 2021

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

RE: Burnside 1214 N-1H to S-6H Well Work Permit Application - 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

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02/04/2022



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

July 1, 2021

Karina Rowe
1148 Mare Run Road
Weston, WV 26452

RE: Burnside 1214 N-1H to S-6H Well Work Permit Application - Notification
Freemans Creek District, Lewis County
West Virginia

Dear Ms. Rowe:

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

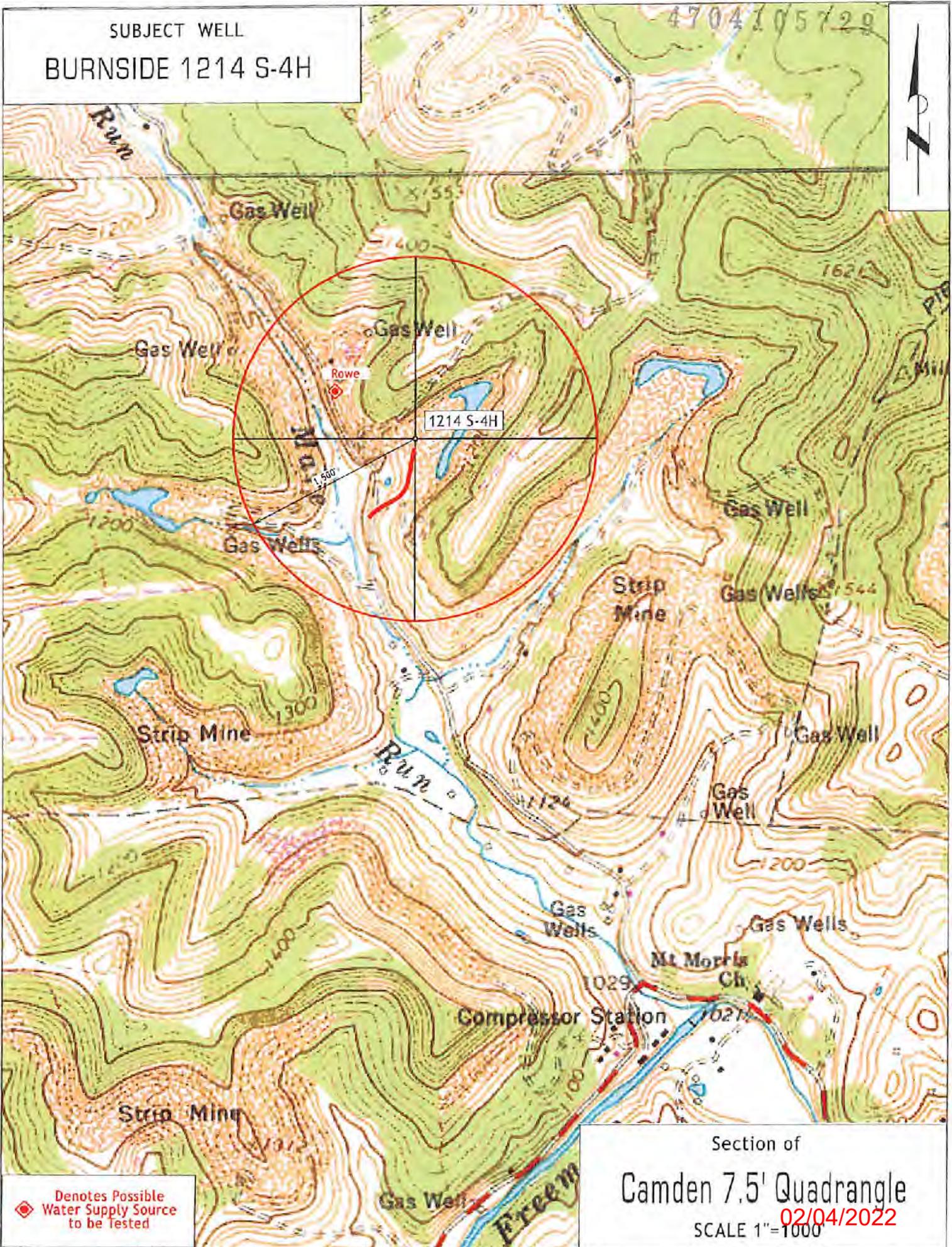
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WV Department of
Environmental Protection

02/04/2022

SUBJECT WELL
BURNSIDE 1214 S-4H

4704105720



1214 S-4H

1,500

Denotes Possible
Water Supply Source
to be Tested

Section of
Camden 7.5' Quadrangle
SCALE 1"=1000
02/04/2022

Diane White

From: Diane White
Sent: Friday, October 16, 2020 2:56 PM
To: Vicki Hoops
Subject: Pre-Drill Water Sampling/Testing for the Burnside 1214 Well Pad

Vicki,
Can you please have the following water sources sampled and tested for pre-drill parameters? The pad is in Lewis county, Freemans Creek district, Camden quadrangle and Middle West Fork Creek watershed.

John and Phillip Burnside, 645 Mare Run Road, Weston, WV 26452 304-203-4091
Karina Rowe, 1148 Mare Run Road, Weston, WV 26542 304-904-6727

Please have the paperwork identified to the Burnside 1214 well pad.
Thank You,
Diane

Diane C. White



HG Energy, LLC
5260 Dupont Road
Parkersburg, WV 26101
304-420-1119 (O)
304-482-0108 (C)
dwhite@hgenergyllc.com
<https://hgenergyllc.com>

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: 10/21/2020 **Date of Planned Entry:** 10/28/2020

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

Name: John and Phillip Burnside (pad, royalty owner)

Address: 645 Mare Run Road
Weston, WV 26542

Name: Bertha Benadum

Address: 604 Mare Run Road
Weston, WV 26542

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: NA

Address: _____

MINERAL OWNER(s)

Name: Bertha & Eric Benadum Cynthia Sumpter

Address: 604 Mare Run Road 3297 Sycamore Lick Road
Weston, WV 26542 Jane Lew, WV 26378

*please attach additional forms if necessary

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Office of Oil and Gas
DEC 16 2021

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>39.119010 & 80.522974</u>
County: <u>Lewis</u>	Public Road Access: <u>Mare Run Road / CR10/9</u>
District: <u>Freeman's Creek</u>	Watershed: <u>Middle West Fork Creek</u>
Quadrangle: <u>Camden WV 7.5</u>	Generally used farm name: <u>Burnside</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: <u>HG Energy II Appalachia, LLC</u>	Address: <u>5260 Dupont Road</u>
Telephone: <u>304-420-1119</u>	<u>Parkersburg, WV 26101</u>
Email: <u>dwhite@hgenergyllc.com</u>	Facsimile: <u>304-863-3172</u>

Oil and Gas Privacy Notice:

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

02/04/2022



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

May 7, 2021

RE: Burnside 1214 N-1H thru S-6II
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

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Environmental Protection

Enclosures

02/04/2022

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: 06/28/2021 **Date Permit Application Filed:** 07/23/2021

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):

Name: John Kent Burnside
Address: 645 Mare Run Road
Weston, WV 26452

Name: Bertha Benedum
Address: 604 Mare Run Road
Weston, WV 26452

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: 541229.9
County: Lewis Northing: 4330088.3
District: Freemans Creek Public Road Access: Mare Run Road/CR 10/9
Quadrangle: Camden WV 7.5' Generally used farm name: Burnside
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
Facsimile: 304-863-3172

Authorized Representative: Diane White
Address: 5260 Dupont Road RECEIVED
Parkersburg, WV 26101 Office of Oil and Gas
Telephone: 304-420-1119 DEC 16 2021
Email: dwhite@hgenergyllc.com
Facsimile: 304-863-3172 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.

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: 07/02/2021 **Date Permit Application Filed:** 07/23/2021

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

- CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

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

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

Name: John Kent Burnside
Address: 645 Mare Run Road
Weston, WV 26452

Name: Bertha Benedum
Address: 604 Mare Run Road
Weston, WV 26452

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:	<u>West Virginia</u>	UTM NAD 83	Fasting:	<u>541229.9</u>
County:	<u>Lewis</u>		Northing:	<u>4330086.3</u>
District:	<u>Freemans Creek</u>	Public Road Access:	<u>Mare Run Road / CR 10/9</u>	
Quadrangle:	<u>Camden WV 7.5'</u>	Generally used farm name:	<u>Burnside</u>	
Watershed:	<u>Middle West Fork Creek</u>			

This Notice Shall Include:

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

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

Address: 5250 Dupont Road
Parkersburg, WV 26101
Facsimile: 304-863-3172

Oil and Gas Privacy Notice:

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

4704105729

HG Energy II Appalachia, LLC
List of Frac Additives by Chemical Name and CAS #
Burnside 1214 Well Pad (N-1H to N-3H, S-4H to S-6H)

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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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

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

November 6, 2020

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

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

Subject: DOH Permit for the Burnside 1214 Pad, Lewis County
Burnside 1214 S-4H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #07-2020-0357 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 0.931.

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

Very Truly Yours,

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

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

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