



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

Monday, November 4, 2024
WELL WORK PERMIT
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for Van Wie 1221 S-10H
47-041-05769-00-00

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: Van Wie 1221 S-10H
Farm Name: HG Energy II Appalachia, LLC
U.S. WELL NUMBER: 47-041-05769-00-00
Horizontal 6A New Drill
Date Issued: 11/4/2024

Promoting a healthy environment.

11/08/2024

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. 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. Also, 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.
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.

11/08/2024

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

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

2) Operator's Well Number: Van Wie 1221 S-10H Well Pad Name: Van Wie 1221

3) Farm Name/Surface Owner: HG Energy II Appalachia, LLC Public Road Access: CR 11/3 aka Straight Run Road

4) Elevation, current ground: 1256' Elevation, proposed post-construction: 1251.7'

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

(b) If Gas Shallow Deep _____
Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 7002' / 7049' and 47' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 7,035'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17,279'

11) Proposed Horizontal Leg Length: 9,094'

12) Approximate Fresh Water Strata Depths: 150', 181', 826'

13) Method to Determine Fresh Water Depths: Nearest offset well data, (47-017-02906, 2480, 4233,)

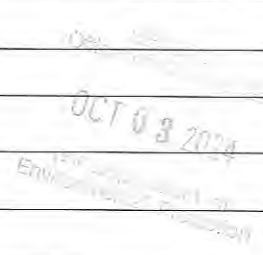
14) Approximate Saltwater Depths: NA

15) Approximate Coal Seam Depths: 220' - 225', 428'-438', 495'-501' (Surface casing is being extended to cover the coal in the DTI Field)

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

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

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



WW-6B
(04/15)

API NO. 47-4704105769
 OPERATOR WELL NO. Van Wie 1221 S-10H
 Well Pad Name: Van Wie 1221

18)

CASING AND TUBING PROGRAM

| TYPE | Size (in) | New or Used | Grade | Weight per ft. (lb/ft) | FOOTAGE: For Drilling (ft) | INTERVALS: Left in Well (ft) | CEMENT: Fill-up (Cu. Ft.)/CTS |
|------------------|-----------|-------------|------------|------------------------|----------------------------|------------------------------|-------------------------------|
| Conductor | 30" | New | LS | 157.5 | 120' | 120' ✓ | CTS |
| Fresh Water/Coal | 20" | NEW | J-55 | 94 | 1225' | 1225' ✓ | 40% Excess, CTS ✓ |
| Intermediate 1 | 13 3/8" | NEW | J-55 BTC | 68 | 2760' | 2760' ✓ | 40% Excess, CTS |
| Intermediate 2 | 9 5/8" | NEW | N/L-80 BTC | 40 | 6050' | 6050' ✓ | 40% Excess Tail, CTS |
| Production | 5 1/2" | NEW | P-110 HP | 23 | 17279' | 17279' ✓ | 20% Excess Tail, CTS |
| Tubing | | | | | | | |
| Liners | | | | | | | |

Kenneth
Greynolds

Digitally signed by: Kenneth Greynolds
 DN: CN = Kenneth Greynolds email = Kenneth.L.Greynolds@wv.gov C = AD O = WVDEP OU = Oil and Gas
 Date: 2024.09.23 13:40:33 -0400

| TYPE | Size (in) | Wellbore Diameter (in) | Wall Thickness (in) | Burst Pressure (psi) | Anticipated Max. Internal Pressure (psi) | Cement Type | Cement Yield (cu. ft./k) |
|------------------|-----------|------------------------|---------------------|----------------------|--|-----------------|--|
| Conductor | 30" | 30" | .500 | | | | Drilled In |
| Fresh Water/Coal | 20" | 26" | .438 | 2110 | 1200 | Type 1, Class A | 40 % excess yield = 1.20, CTS |
| Intermediate 1 | 13 3/8" | 17 1/2" | .480 | 3450 | | Type 1/Class A | Lead 40% excess, Tail 0% excess |
| Intermediate 2 | 9 5/8" | 12 1/4" | .395 | 5750 | | Type 1/Class A | Lead 40% excess, Tail 0% Excess |
| Production | 5 1/2" | 8 1/2" | .415 | 16240 ✓ | 12500 | Type 1/Class A | 20% excess yield = 1.10, tail yield 1.00 |
| Tubing | | | | | | | |
| Liners | | | | | | | |

PACKERS

06162557
 WV Department of
 Environmental Protection

| | | | | |
|-------------|--|--|--|--|
| Kind: | | | | |
| Sizes: | | | | |
| Depths Set: | | | | |

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 7035'. Drill horizontal leg to estimated 9,094' lateral length, 17,279' 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): 24.95 acres

22) Area to be disturbed for well pad only, less access road (acres): 9.53 acres

23) Describe centralizer placement for each casing string:

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



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

Conductor -NA, Casing to be drilled in w/ Dual Rotary Rig.
Fresh Water/Coal - *15.6 ppg PNE-1 + 3% bwoc CaCl40% ExcessYield=1.20 / CTS*
Intermediate 1 - *** Storage String *** CTS ***15.4 ppg Lead - Yield 1.24 - D896 Surface Set 100 lb / sack (Mix of Class A and Gypsum to meet Dominion Requirements)B348 - 0.5% BWOB Fluid Loss / D013 - 0.75% BWOB Retarder / D47 - 0.02 gal / sack VBWOB Anti Foam / D202 - 0.15% BWOB Dispersant / D055 1.6 lb per BBL CemNET - 60% Excess15.6 ppg Tail - Yield 1.17 - D696 Surface Set 100 lb / sack (Mix of Class A and Gypsum to meet Dominion Requirements)B160A - 0.15% BWOB Dispersant / B547 - 0.35% BWOB GasBLOK* / D013 - 0.3% BWOB Retarder / D047 - 0.02 gal / sack And Foam / D901 - 0.03 gal / sack Retarder - 0% Excess*
Intermediate 2 - *Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS*
Production - *Lead: 14.5 ppg PO2-PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA17020% ExcessLead Yield=1.19Tail Yield=1.94CTS*

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
Van Wie 1221 Well Pad (N-1H to S-12H)
Cement Additives

| Material Name | Material Type | Material Description | CAS # | | | | | | | | | | | | | | | | | | |
|--|------------------|--|---|-----------------|------------|------------|-----------------------------------|----------|---------------|-----------------------------------|---------|---------------|--|--------|-------------|-----------------------------------|---------|---------------|------------------|---------|---------------|
| Premium NE-1 | Portland Cement | Premium NE-1 is a portland cement with early compressive strength properties. | <table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Portland cement</td> <td>90 - 100</td> <td>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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| Portland cement | 90 - 100 | 65997-15-1 | | | | | | | | | | | | | | | | | | | |
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| Magnesium oxide | 1 - 5 | 1309-48-4 | | | | | | | | | | | | | | | | | | | |
| Crystalline silica: Quartz (SiO2) | 0.1 - 1 | 14808-60-7 | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | |
| | | | Ingredient name | % | CAS number | | | | | | | | | | | | | | | | |
| bentonite | 90 - 100 | 1302-78-9 | | | | | | | | | | | | | | | | | | | |
| Crystalline silica: Quartz (SiO2) | 5 - 10 | 14808-60-7 | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | |
| | | | Ingredient name | % | CAS number | | | | | | | | | | | | | | | | |
| Calcium chloride | 90 - 100 | 10043-52-4 | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | |
| | | | Ingredient name | % | CAS number | | | | | | | | | | | | | | | | |
| No hazardous ingredient | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | |
| | | | Ingredient name | % | CAS number | | | | | | | | | | | | | | | | |
| Tributyl phosphate | 90 - 100 | 126-73-8 | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | |
| | | | Ingredient name | % | CAS number | | | | | | | | | | | | | | | | |
| Sucrose | 90 - 100 | 57-50-1 | | | | | | | | | | | | | | | | | | | |
| EC-1 | Gas Migration | Multi-purpose polymer additive used to control free fluid, fluid loss, rheology, and gas migration. | <table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Calcium magnesium oxide</td> <td>90 - 100</td> <td>37247-91-9</td> </tr> </tbody> </table> | Ingredient name | % | CAS number | Calcium magnesium oxide | 90 - 100 | 37247-91-9 | | | | | | | | | | | | |
| | | | Ingredient name | % | CAS number | | | | | | | | | | | | | | | | |
| Calcium magnesium oxide | 90 - 100 | 37247-91-9 | | | | | | | | | | | | | | | | | | | |
| MPA-170 | Base | A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement. | <table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> </tbody> </table> | Ingredient name | % | CAS number | Crystalline silica: Quartz (SiO2) | 5 - 10 | 14808-60-7 | Calcium oxide | 1 - 5 | 1305-78-8 | | | | | | | | | |
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| Crystalline silica: Quartz (SiO2) | 5 - 10 | 14808-60-7 | | | | | | | | | | | | | | | | | | | |
| Calcium oxide | 1 - 5 | 1305-78-8 | | | | | | | | | | | | | | | | | | | |
| 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. | | | | | | | | | | | | |
| | | | Ingredient name | % | CAS number | | | | | | | | | | | | | | | | |
| Organic acid salt | 40 - 50 | Trade secret. | | | | | | | | | | | | | | | | | | | |
| S-5 | Surfactant | Used to water wet casing and formation to facilitate cement bonding. | <table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>2-Butoxyethanol</td> <td>20 - 30</td> <td>111-76-2</td> </tr> <tr> <td>Proprietary surfactant</td> <td>10 - 20</td> <td>Trade secret.</td> </tr> <tr> <td>D-Glucopyranose, oligomeric, C10-16-alkyl glycosides</td> <td>5 - 10</td> <td>110615-47-9</td> </tr> <tr> <td>Alkylarylsulfonate amine salt</td> <td>1 - 5</td> <td>Trade secret.</td> </tr> <tr> <td>Polyoxyalkylenes</td> <td>0.1 - 1</td> <td>Trade secret.</td> </tr> </tbody> </table> | Ingredient name | % | CAS number | 2-Butoxyethanol | 20 - 30 | 111-76-2 | Proprietary surfactant | 10 - 20 | Trade secret. | D-Glucopyranose, oligomeric, C10-16-alkyl glycosides | 5 - 10 | 110615-47-9 | Alkylarylsulfonate amine salt | 1 - 5 | Trade secret. | Polyoxyalkylenes | 0.1 - 1 | Trade secret. |
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| 2-Butoxyethanol | 20 - 30 | 111-76-2 | | | | | | | | | | | | | | | | | | | |
| Proprietary surfactant | 10 - 20 | Trade secret. | | | | | | | | | | | | | | | | | | | |
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| Alkylarylsulfonate amine salt | 1 - 5 | Trade secret. | | | | | | | | | | | | | | | | | | | |
| Polyoxyalkylenes | 0.1 - 1 | Trade secret. | | | | | | | | | | | | | | | | | | | |

OCT 03 2024
 Department of
 Environmental Protection

*** Storage String *** CTS ***

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

1221 S-10H
 Marcellus Shale Horizontal
 Doddridge County, WV



| Ground Elevation | | | 1221 S-10H SHL | | | | 14197254.68N 1734291.23E | | | |
|------------------|-------------------------|-------------------------|--------------------------------|-----------------------------------|------------------------|--|--|---|--|------|
| Azm | | | 1221 S-10H LP | | | | 14197398.61N 1736299.29E | | | |
| WELLBORE DIAGRAM | | | 1221 S-10H BHL | | | | 14188827.83N 1739321.94E | | | |
| 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 | |
| | | Coal | 740 | 746 | AIR | 15.6 ppg PNE-1 + 3% bwoc CaCl 40% Excess Yield=1.20 / CTS | Centralized every 3 joints to surface | Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement. | Surface casing = 0.438" wall thickness Burst=2110 psi | |
| 26" | 20" 94# J-55 | Fresh Water Protection | 0 | 1225 | AIR / KCL Salt Polymer | See above (LEFT) for Storage String Cement Blend to Meet DTI Requirements for Gas Storage Field Isolation | Bow Spring on every joint <i>Will also be running ACP for isolating storage zone*</i> | Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement. | Intermediate casing = 0.480" wall thickness Burst=3450 psi | |
| | | Little Lime | 2167 | 2187 | | | | | | |
| | | Big Lime | 2216 | 2265 | | | | | | |
| 17.5" | 13-3/8" 68# J-55 BTC | Injun / Gantz (Storage) | 2265 / 2507 | 2361 / 2647 | AIR / KCL Salt Polymer | Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS | Bow Spring on first 2 joints then every third joint to 100' form surface | Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement. | Intermediate casing = 0.395" wall thickness Burst=5750 psi | |
| | | Thirty Foot | 2789 | 2799 | | | | | | |
| | | Gordon | 2837 | 2915 | | | | | | |
| | | 5th Sand | 3066 | 3102 | | | | | | |
| 12.25" | 9-5/8" 40# N / L-80 BTC | Bayard | 3161 | 3174 | AIR / KCL Salt Polymer | Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS | Bow Spring on first 2 joints then every third joint to 100' form surface | Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement. | Intermediate casing = 0.395" wall thickness Burst=5750 psi | |
| | | Speechley | 3634 | 3665 | | | | | | |
| | | Benson | 5038 | 5072 | | | | | | |
| | | Alexander | 5324 | 5444 | | | | | | |
| | | Intermediate 2 | 0 | TVD: 5675' MD: 6050' Inc: 34 deg. | | | | | | |
| | | 8.75" | 5-1/2" 23# P-110 HP TXP / W461 | Rhinestreet | | | | | | 6303 |
| 8.5" Curve | Cashaqua | 6591 | | 6736 | 11.5ppg-12.5ppg SOBMM | | | | | |
| 8.5" Lateral | Middlesex | 6736 | | 6815 | 11.5ppg-12.5ppg SOBMM | | | | | |
| | West River | 6815 | | 6884 | | | | | | |
| | Burkett | 6884 | | 6925 | | | | | | |
| | Tully Limestone | 6925 | | 6952 | 11.5ppg-12.5ppg SOBMM | | | | | |
| | Hamilton | 6952 | | 7002 | | | | | | |
| | Marcellus | 7002 | | 7049 | | | | | | |
| | TMD / TVD (Production) | 17278 | | 7035 | | | | | | |
| | Onondaga | 7049 | | | | | | | | |

LP @ 7035' TVD / B184' MD

8.5" Hole - Cemented Long String
 5-1/2" 23# P-110 HP TXP / W461

+/-9094' ft Lateral

TD @ +/-7035' TVD
 +/-17278' MD

4704105769

WW-9
(4/16)

4704105769

API Number 47 - _____ - _____
Operator's Well No. Van Wie 1221 S-10H

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) Fink Creek Quadrangle Vadis 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 site)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

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

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

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

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

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

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

-Landfill or offsite name/permit number? See Attached

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

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

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

Company Official Signature Diane White

Company Official (Typed Name) Diane White

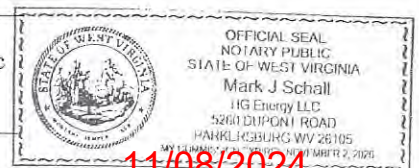
Company Official Title Agent

Subscribed and sworn before me this 19th day of September, 2024

[Handwritten Signature]

Notary Public

My commission expires 11/2/2026



11/08/2024

4704105769

Cuttings Disposal/Site Water

Cuttings-Haul off Company:

Eap Industries, Inc. DOT # 0876278
1575 Smith Two State Rd. Atlasburg, PA 15004
1-888-284-5227

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

Environmental Coordination Services & Recycling (ECS&R)
8287 US Highway 19
Cochranon, PA 16314
814-425-7778

Disposal Locations:

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

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

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

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

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

Waste Management Kelly Run Permit # 100563
1901 Park Side Drive
Elizabeth, PA 15037
412-384-7569

Waste Management South Hills (Arnoni) Permit # 100592
3100 Hill Road
Liberty, 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 # 1082
1488 Dawson Drive
Bridgeport, WV 26330

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

RECEIVED
Office of Oil and Gas
OCT 03 2024
Division of Environmental Protection

11/08/2024

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Wetzel County Landfill Permit # SWF-1021-97 / WV 0109185
Rt 1 Box 156A
New Martinsville, WV 26035
304-455-8800

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

Energy Solutions Services, Inc. Permit # R-78006-124
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 # 720488
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 208997
Dallas, TX 75320-8997

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
724-225-1889

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

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

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

Force, Inc.
1380 Rte. 286 Hwy. E, Suite 203
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 #1B)
Permit # 3862
300 Cherrington Pkwy, Suite 200
Coraopolis, PA 15108
412-829-7275

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

Kernble 1-D Well
Permit # 8780
7675 East Pike
Norwich, Oh 43767
614-648-8898
740-786-6485

OCT 03 2024

11/08/2024

4704105769

Adams #2 (Buckeye Brine, LLC)
2205 Westover Road
Austin Tx 78708
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 78708
512-478-6545

Mozena #1 Well (SWIW # 13)
Permit # 34-157-2-5511-00-00
5867 E. State Street
Newcomerstown, OH 43882
740-763-3966

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

SCS 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
304-823-6568

US Steele 11385
Permit # 47-001-00561
200 Evergreen Drive
Waynesburg, PA 15780
304-823-6568

Chapin #7 UIC (SWIW #7)
Permit # 34-083-2-4187-00-00
Elkhead Gas & Oil Company
12163 Marne Rd. NE
Newark, OH 43055
740-763-3966

RECEIVED
Office of Oil and Gas
OCT 03 2024
DEPARTMENT OF
ENVIRONMENTAL PROTECTION

11/08/2024

4704105769

Form WW-9

Operator's Well No. Van Wie 1221 S-10H

HG Energy II Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 51.82 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: Kenneth Greynolds
Digitally signed by: Kenneth Greynolds
DN: CN = Kenneth Greynolds email = Kenneth.L.Greynolds@wv.gov C = AD O = WVDEP OU = Oil and Gas
Date: 2024.09.23 13:44:16 -0400

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

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

Office of Environmental Protection
OCT 03 2024
WV Department of Environmental Protection

Title: Oil & Gas Inspector

Date: _____

Field Reviewed? () Yes () No

11/08/2024

HG Energy II Appalachia, LLC

Site Safety Plan

Van Wie 1221 Well Pad
2891 Straight Run Road, Alum Bridge
Doddridge County, WV 26321

January 2024: Version 1

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

HG Energy II Appalachia, LLC

5260 Dupont Road

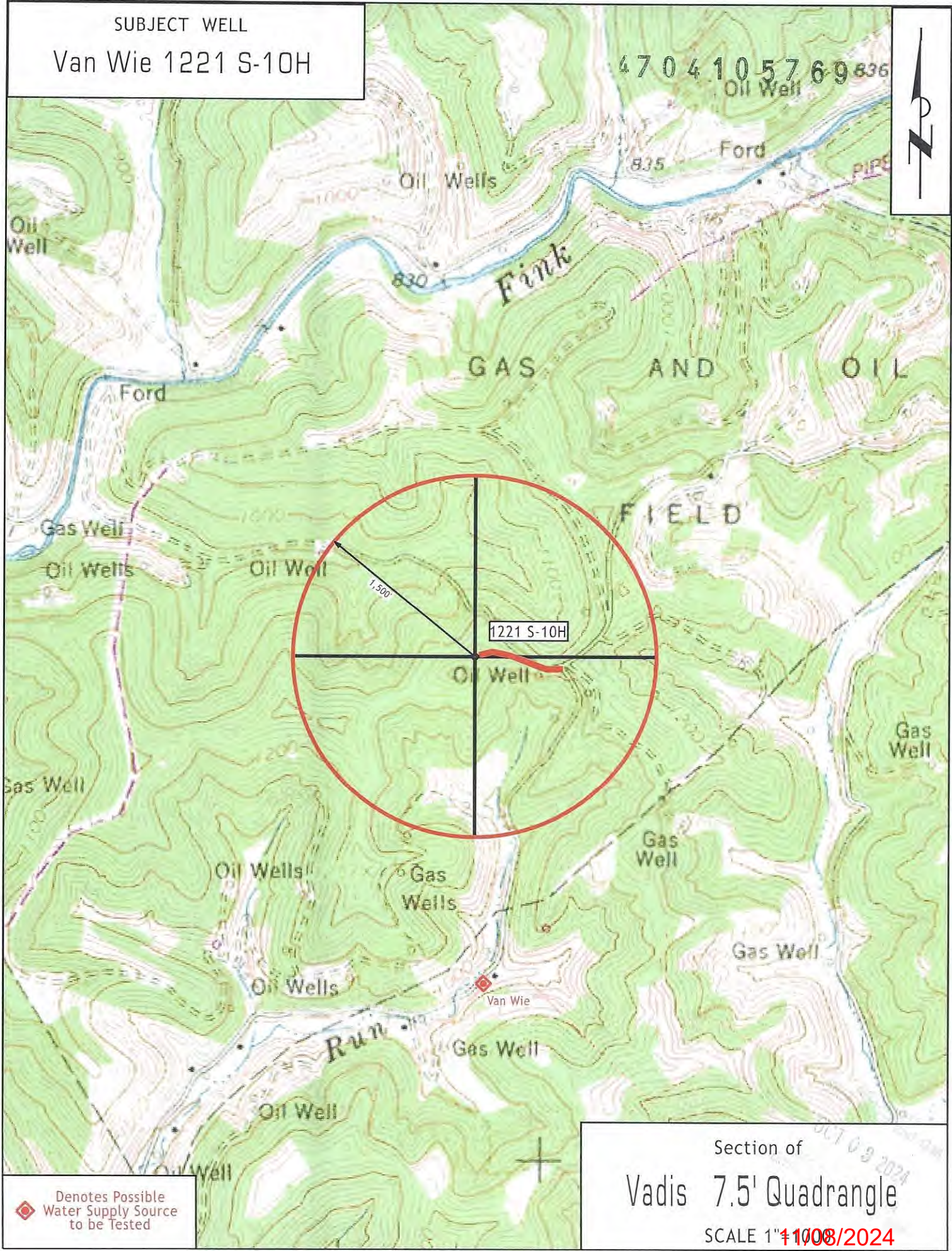
Parkersburg, WV 26101

Office of Oil and Gas
OCT 03 2024
West Virginia Department of Environmental Protection

Kenneth Greynolds

Digitally signed by Kenneth Greynolds
DN: cn = Kenneth Greynolds, email = Kenneth.L.
Greynolds@wv.gov, c = US, o = WVDEP, ou = OIG
/sig
Date: 2024.05.16 11:25:55 -0400

SUBJECT WELL
Van Wie 1221 S-10H



Denotes Possible Water Supply Source to be Tested

Section of
Vadis 7.5' Quadrangle
SCALE 1" = 1000'
10/8/2024

HG Energy II Appalachia, LLC
Well No. Van Wie 1221 S-10H

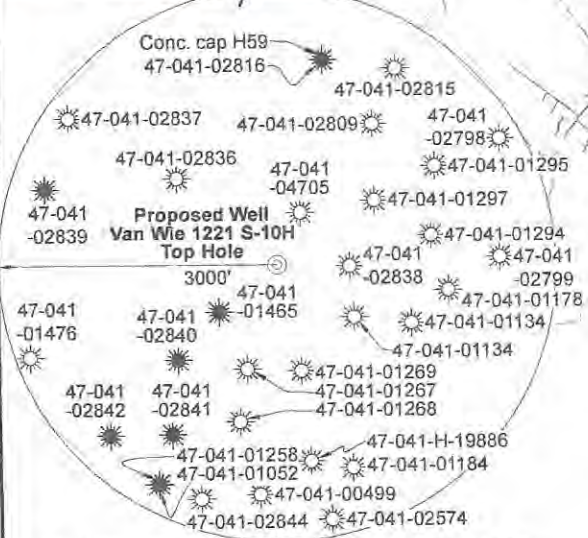


Page 1 of 2



I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

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



Note: 0 water wells, 0 cistern, and 0 pond were 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.

7,574' to Bottom Hole
748' to Top Hole
TOP LATITUDE 39 - 07 - 30
BTM LATITUDE 39 - 05 - 00
TOP HOLE LONGITUDE 80 - 40 - 00
BTM HOLE LONGITUDE 80 - 37 - 30
4,360' to Bottom Hole
11,084' to Top Hole



| Tag | Bearing | Dist. | Description |
|-----|------------|----------|-----------------|
| L1 | N 74°04' E | 2,697.8' | 5/8" Iron rebar |
| L2 | S 71°41' E | 2,626.4' | 47-041-02839 |
| L3 | S 60°24' E | 3,513.7' | 5/8" Iron rebar |
| L4 | S 34°10' W | 1,847.0' | 47-041-02809 |
| L5 | N 85°54' E | 2,013.2' | Landing Point |

FILE NO: 170-12-30-FC-22
DRAWING NO: Van Wie 1221 S-10H Well Plat-S
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: September 13, 2024
OPERATOR'S WELL NO. Van Wie 1221 S-10H
API WELL NO
47 - 041 - 05769
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1,251.77' WATERSHED: Fink Creek QUADRANGLE: Vadis
DISTRICT: Freemans Creek COUNTY: Lewis
SURFACE OWNER: HG Energy II Appalachia, LLC, et al ACREAGE: 121.95
ROYALTY OWNER: Joseph Krenn, et al LEASE NO: ACREAGE: 245
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,035' TVD
17,279' MD

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

HG Energy II Appalachia, LLC
Well No. Van Wie 1221 S-10H



Page 2 of 2

West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.

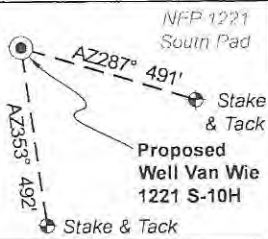
UTM Zone 17, NAD 1983
Plat orientation and corner and well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.

Notes: Well No. Van Wie 1221 S-10H
WVCS 1927, North Zone
Top Hole Coordinates
Lat: 39°05'40.41"
Lon: 80°40'09.49"
Landing Point Coordinates
Lat: 39°05'41.76"
Lon: 80°39'44.00"
Bottom Hole Coordinates
Lat: 39°04'16.90"
Lon: 80°39'06.07"

Notes: Well No. Van Wie 1221 S-10H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,197,254.68'
E: 1,734,291.23'
Landing Point Coordinates
N: 14,197,398.61'
E: 1,736,299.29'
Bottom Hole Coordinates
N: 14,188,827.83'
E: 1,739,321.94'

Notes: Well No. Van Wie 1221 S-10H
UTM NAD 1983 (Meters)
Top Hole Coordinates
N: 4,327,331.881m
E: 528,613.024m
Landing Point Coordinates
N: 4,327,375.751m
E: 529,225.082m
Bottom Hole Coordinates
N: 4,324,763.372m
E: 530,146.388m

Well Location References
Not to Scale



RECORDED
OCT 03 2024
Office of Oil and Gas
West Virginia Department of Environmental Protection

Legend

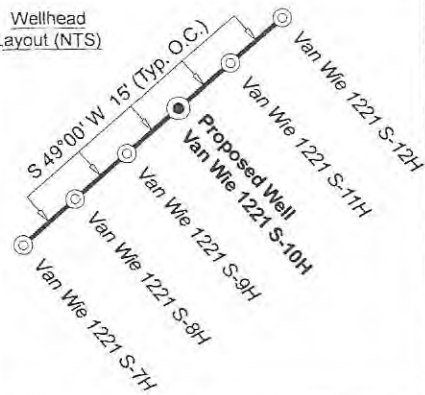
- Proposed gas well
- Well Reference, as noted
- Monument, as noted
- Existing Well, as noted
- Existing Plugged Well, as noted
- Digitized Well, as noted
- Creek or Drain
- Existing Road
- Surface boundary (approx.)

| ID | Lease |
|----|---|
| 6 | Joseph Krenn, et ux |
| 14 | C.K. Gibson, et ux |
| 15 | Elsie & J.P. Linder, et al |
| 16 | E. Ray Bennett, et ux, et al |
| 18 | HG Energy II Appalachia, LLC. |
| 19 | J.C. & A.C. Starcher |
| 20 | HG Energy II Appalachia, LLC. |
| 21 | Riverside Farm Livestock and Woodland LLC |
| 55 | Ashley A. Henry |

Lewis Co. (Freemans Creek Dist.)

| No. | TM / Par | Owner | Bk / Pg | Ac. |
|-----|-----------|-----------------------------------|-----------|--------|
| 1 | 2D / 3 | HG Energy II Appalachia, LLC | 800 / 637 | 131.85 |
| 2 | 2D / 29 | Anthony S. & Dawn H. VanWie | 732 / 622 | 26.63 |
| 3 | 2D / 3.1 | HG Energy II Appalachia, LLC | 800 / 637 | 20.00 |
| 4 | 2C / 7 | James R. & Shelia A. Gum, II | 721 / 350 | 350.78 |
| 5 | 2D / 40 | Judith A. Rioch | 403 / 270 | 26.96 |
| 6 | 2D / 37 | Jacob R. Straley Heirs | 728 / 53 | 97.00 |
| 7 | 2D / 30 | Anthony S. & Dawn H. VanWie | 732 / 622 | 19.00 |
| 8 | 2D / 36 | Eugene C. Groah, Jr. | 705 / 777 | 93.12 |
| 9 | 2D / 35 | Eugene C. Groah, Jr. | 705 / 777 | 80.00 |
| 10 | 2E / 41.2 | Charles M. & Katie D. Groah | 652 / 348 | 1.84 |
| 11 | 2D / 47 | Frances McCutchan, et al | 726 / 551 | 151.00 |
| 12 | 2E / 41 | Charles M. & Katie D. Groah | 575 / 205 | 15.50 |
| 13 | 2E / 43 | David B. Lang | 662 / 726 | 68.00 |
| 14 | 2E / 44 | David B. Lang | 662 / 726 | 43.00 |
| 15 | 3E / 2 | Thomas Quinn, et al | W46 / 21 | 95.50 |
| 16 | 3E / 3 | Michael Klein | 478 / 157 | 65.75 |
| 17 | 2E / 45 | Paul J. Groah & James C. Empoules | 723 / 719 | 173.00 |
| 18 | 2E / 46 | Emily M. & Carlton E. Jones, II | 734 / 928 | 130.00 |
| 19 | 3E / 5 | Richard Guzman | 771 / 516 | 36.53 |

Wellhead
Layout (NTS)



FILE NO: 170-12-30-FC-22
DRAWING NO: Van Wie 1221 S-10H Well Plat-S
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: September 13 2024
OPERATOR'S WELL NO. Van Wie 1221 S-10H
API WELL NO
47 - 041 - 05769
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,251.77' WATERSHED: Fink Creek QUADRANGLE: Vadis
DISTRICT: Freemans Creek COUNTY: Lewis
SURFACE OWNER: HG Energy II Appalachia, LLC, et al ACREAGE: 131.85
ROYALTY OWNER: Joseph Krenn, et al LEASE NO: ACREAGE: 245
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,035' TVD 17,279' MD

11/08/2024

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

WW-6A1
(5/13)

Operator's Well No. Van Wie 1221 S-210H

**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****

Co-Tenancy utilization - At least 75% of the royalty owners have consented to the lawful use or development of the natural gas mineral property on the tract. The interests of the remaining co-tenants will be secured pursuant to the Co-Tenancy Act
Horizontal Well Unit Utilization - Subject to unitization filing with the WV Oil and Gas Conservation Commission

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

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

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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

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

**HG Energy II Appalachia, LLC
Van Wie 1221 S10H Lease Chain**

4704105769

| 1221S Tract | LEGACY LEASE NUMBER | TAX MAP | LEASE NUMBER | GRANTOR/LESSOR | GRANTEE/LESSEE | ROYALTY | DEED BOOK | PAGE | | | | |
|---|--|--|--------------|---|--|----------------------------------|------------|------------------------------------|------------------------------|---|-----|-----|
| 6 | FK054825 FK079440 FEE | 03-002D-0003-0000 03-002D-0003-0001 03-002D-0003-0003 03-002D-0028-0000 03-002D-0029-0000 03-002D-0030-0000 | Q100903000 | JOSEPH KRENN AND EMILY E. KRENN, HIS WIFE | SOUTH PENN OIL COMPANY | NOT LESS THAN 1/8 | 33 | 232 | | | | |
| | | | | WILLIAM A. LOUWTHER | SOUTH PENN OIL COMPANY | NOT LESS THAN 1/8 | 42 | 401 | | | | |
| | | | | SOUTH PENN OIL COMPANY | SOUTH PENN NATURAL GAS CO | ASSIGNMENT | 156 | 570+F64:165 | | | | |
| | | | | SOUTH PENN NATURAL GAS CO | HOPE NATURAL GAS COMPANY | ASSIGNMENT | 166 | 494 | | | | |
| | | | | 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 | 9 | 628 | | | | |
| | | | | 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 | NOT LESS THAN 1/8 | 692 | 570 | | | | |
| | | | | 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 | | | | | |
| | | | | 14 | FK000784 | 03-002D-0036-0000 | Q100650000 | 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 | | | | |
| DOMINION ENERGY TRANSMISSION, INC. | HG ENERGY II APPALACHIA, LLC | MINERAL DEED | 740 | | | | | 746 | | | | |
| C. K. GIBSON, A. P. GIBSON, HIS WIFE | SOUTH PENN OIL COMPANY | NOT LESS THAN 1/8 | 39 | | | | | 314 | | | | |
| SOUTH PENN OIL COMPANY | HOPE NATURAL GAS COMPANY | ASSIGNMENT | 85 | | | | | 122 | | | | |
| SOUTH PENN OIL COMPANY | SOUTH PENN NATURAL GAS CO | ASSIGNMENT | 156 | | | | | 570 | | | | |
| SOUTH PENN NATURAL GAS CO | HOPE NATURAL GAS COMPANY | ASSIGNMENT | 166 | | | | | 494 | | | | |
| 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 | 51 | | | | | 795 | | | | |
| CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 9 | | | | | 628 | | | | |
| 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 | | | | | | | | |

| | | | | | | | | |
|----|--------------------------|---|--------------------------|---|--|---|-------|-----|
| 15 | FK047105 FK051217 | 03-002D-0035-0000 | Q100262000 Q100916000 | ELSIE LINDER AND J.P. LINDER, HER HUSBAND; C.E. GIBSON AND STATA GIBSON, HIS WIFE; IDA FRAZIER AND JAMES W. FRAZIER, HER HUSBAND; MARTHA E. BROWN AND M.W. BROWN, HER HUSBAND; EVELYN GIBSON, WIDOW; EVELYN GIBSON, GUARDIAN OF VIRGINIA I. GIBSON, CHARLES B. GIBSON, BOYD F. GIBSON AND VIVIAN MAY GIBSON, MINORS | HOPE NATURAL GAS COMPANY | NOT LESS THAN 1/8 | 144 | 195 |
| | | | | 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 | 51 | 795 |
| | | | | CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 9 | 628 |
| | | | | 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 |
| 16 | FK061621 | 03-002E-0043-0000 03-002E-0043-0001 | Q101040000 | E. RAY BENNETT AND HAZEL L. BENNETT, HIS WIFE; AND A. A. TETER AND EDA TETER, HIS WIFE | HOPE NATURAL GAS COMPANY | NOT LESS THAN 1/8 | 208 | 291 |
| | | | | 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 | 51 | 795 |
| | | | | CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 9 | 628 |
| | | | | 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 |
| 18 | FK079442 FEE | 03-002D-0038-0000 03-002D-0040-0000 p/o 03-002D-0042-0000 | FK079442 FEE | DOMINION ENERGY TRANSMISSION, INC. | HG ENERGY II APPALACHIA, LLC | MINERAL DEED | 740 | 746 |
| 19 | FK002931 FK079469 FEE | 03-002D-0037-0000 | FK002931 FK079469 FEE | J. C. STARCHER AND A. C. STARCHER | SOUTH PENN OIL COMPANY | NOT LESS THAN 1/8 | 39 | 201 |
| | | | | SOUTH PENN OIL COMPANY | HOPE NATURAL GAS COMPANY | ASSIGNMENT | 52 | 239 |
| | | | | SOUTH PENN OIL COMPANY | SOUTH PENN NATURAL GAS CO | ASSIGNMENT | 156 | 570 |
| | | | | SOUTH PENN NATURAL GAS CO | HOPE NATURAL GAS COMPANY | ASSIGNMENT | 166 | 494 |
| | | | | 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 | 51 | 795 |
| | | | | CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 9 | 628 |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION ENERGY TRANSMISSION, INC. | MERGER/NAME CHANGE | WVSOS | |
| | | | | DOMINION ENERGY TRANSMISSION, INC. | EASTERN GAS TRANSMISSION AND STORAGE, INC. | MERGER/NAME CHANGE | WVSOS | |
| | | | | EASTERN GAS TRANSMISSION AND STORAGE, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 798 | 42 |

4704105769

| 20 | FK079443 FEE | 03-002D-0047-0000 | FK079443 FEE | DOMINION ENERGY TRANSMISSION, INC. | HG ENERGY II APPALACHIA, LLC | MINERAL DEED | 740 | 746 |
|---|------------------------------|---------------------|-----------------|--|------------------------------|---------------------|-----|-----|
| 21 | HGII02866 | 03-002E-0044-0000 | HGII02866 | Riverside Farm Livestock and Woodland, LLC | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 795 | 3 |
| 55 | HGII03420 et al | 03-003E-0003-0000 | HGII03420 et al | Ashley A. Henry | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 800 | 908 |
| | | | | Alice Kraft aka Mary Alicia Kraft | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 795 | 466 |
| | | | | Thomas Vincent Kraft III | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 793 | 787 |
| | | | | Elizabeth Sarah Idella Craft AKA Betty Dell Craft | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 798 | 11 |
| | | | | James Kenneth Morrison | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 802 | 361 |
| | | | | Stephen Michael Morrison | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 802 | 357 |
| | | | | Shirley Ann Petras | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 800 | 251 |
| | | | | Bernard Thomas Stark | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 798 | 17 |
| | | | | James Richard Will | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 800 | 672 |
| | | | | Martha Jane Nicholson | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 798 | 13 |
| | | | | Mary Patricia Davis | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 798 | 566 |
| | | | | Charles Joseph Will | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 798 | 15 |
| | | | | Travis Z. Arbogast | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 810 | 73 |
| | | | | Tracee E. Tewillager aka Tracee Tewilliager | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 806 | 925 |
| | | | | Taryan G. Arbogast AKA Taryn Carbone | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 805 | 965 |
| | | | | Catherine E. Ratliff and Carl V. Ratliff, JTWROS | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 805 | 115 |
| | | | | Carol Ann Castillo | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 799 | 486 |
| | | | | Bobby J. Utt | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 797 | 91 |
| | | | | Jacob L. Rumbach | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 800 | 139 |
| | | | | Charles Kreyenbuhl | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 799 | 960 |
| | | | | Leo Kreyenbuhl | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 798 | 911 |
| | | | | Patricia Donley | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 796 | 271 |
| | | | | Leoma Fallon | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 796 | 825 |
| | | | | Michael J. Fallon AKA John Michael Fallon | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 795 | 1 |
| | | | | John Joseph Fallon | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 798 | 949 |
| | | | | Patricia Fallon Kackley | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 796 | 273 |
| | | | | Charles Fallon | HG ENERGY II APPALACHIA, LLC | NOT LESS THAN 1/8 | 796 | 275 |
| | | | | Jeannie Alfred | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Lawrence Richard Craft II | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Tyler I. Arbogast | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Sheila Ann Kerns | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Stephen Kreyenbuhl, aka Stephen Michael Kreyenbuhl | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Mark Duckett | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Morgan Duckett | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Nolan Duckett | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Stephen Owen Quinn | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Agnes Queen | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Catherine Quinn | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Thomas Quinn | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| | | | | Patrick Quinn | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 |
| Owen Quinn | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 | | | | |
| unknown heirs or successors of Marjorie Weaver | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 | | | | |
| Edward Phillip Klein, Jr. aka Edward P. Klein, Jr | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 | | | | |
| Michael A. Klein aka Michael Klein aka Michael A. Klkein | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 | | | | |
| Marianne Ourand aka Marianne A. (Ourand) Hammer aka Marianne A. Hammer | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 | | | | |
| Karen J. Hess | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 | | | | |
| unknown heirs or successors of Dolores T. Keener | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 | | | | |
| The Forrest G. Powers and Mary M. Powers Revocable Intervivos Trust dated August 31, 2000 | HG ENERGY II APPALACHIA, LLC | COTENANCY AFFIDAVIT | 816 | 751 | | | | |



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

4704105769

September 29, 2024

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

RE: Drilling Under Roads – Van Wie 1221 S-10H
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 Van Wie 1221 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 Van Wie 1221 laterals will drill through, including, 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

11/08/2024

WW-PN
(11-18-2015)

**Horizontal Natural Gas Well Work Permit
Application Notice By Publication**

Notice is hereby given:

Pursuant to West Virginia Code 22-6A-10(e) prior to filing an application for a permit for a horizontal well the applicant shall publish in the county in which the well is located or is proposed to be located a Class II legal advertisement.

Paper: The Weston Democrat Newspaper

Public Notice Date: Wednesday, June 5th & Wednesday, June 12th, 2024

The following applicant intends to apply for a horizontal natural well work permit which disturbs three acres or more of surface excluding pipelines, gathering lines and roads **or** utilizes more than two hundred ten thousand gallons of water in any thirty day period.

Applicant: HG Energy II Appalachia, LLC **Well Number:** Van Wie 1221 S-10H

Address: 5260 Dupont Road
Parkersburg, WV 26101

Business Conducted: Natural gas production.

Location –

State: West Virginia County: Lewis
District: Freemans Creek Quadrangle: Vadis 7.5'
UTM Coordinate NAD83 Northing: 4327331.9
UTM coordinate NAD83 Easting: 528613.0
Watershed: Fink Creek

Coordinate Conversion:

To convert the coordinates above into longitude and latitude, visit: http://tagis.dep.wv.gov/convert/llutm_conus.php

Electronic notification:

To receive an email when applications have been received or issued by the Office of Oil and Gas, visit <http://www.dep.wv.gov/insidedep/Pages/DEPMailingLists.aspx> to sign up.

Reviewing Applications:

Copies of the proposed permit application may be reviewed at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE Charleston, WV 25304 (304-926-0450). Full copies or scans of the proposed permit application will cost \$15, whether mailed or obtained at DEP headquarters. Copies may be requested by calling the office or by sending an email to DEP.comments@wv.gov.

Submitting Comments:

Comments may be submitted online at <https://apps.dep.wv.gov/oog/comments/comments.cfm>, or by letter to Permit Review, Office of Oil and Gas, 601 57th Street, SE Charleston, WV 25304. Please reference the county, well number, and operator when using this option.

Regardless of format for comment submissions, they must be received no later than thirty days after the permit application is received by the Office of Oil and Gas.

For information related to horizontal drilling visit: www.dep.wv.gov/oil-and-gas/pages/default.aspx

11/08/2024

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

Date of Notice Certification: 09/29/2024

API No. 47- _____
Operator's Well No. Van Wie 1221 S-10H
Well Pad Name: Van Wie

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>528613.0</u> |
| County: | <u>Lewis</u> | | Northing: | <u>4327331.9</u> |
| District: | <u>Freemans Creek</u> | Public Road Access: | <u>CR 11 / 3 via Straight Run Road</u> | |
| Quadrangle: | <u>Vadis WV 7.5's</u> | Generally used farm name: | <u>Van Wie</u> | |
| Watershed: | <u>Fink Creek</u> | | | |

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

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

Required Attachments:

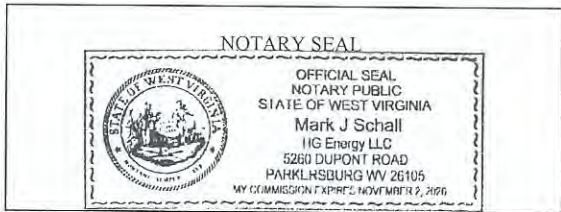
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication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

11/08/2024

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 29th day of September, 2024.

[Signature] Notary Public

My Commission Expires 11/2/2026

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.

Office of Oil and Gas
OCT 09 2024
Encl.

4704105769

WW-6A
(9-13)

API NO. 47-
OPERATOR WELL NO. Var Wb 1221 NTH to S12H
Well Pad Name: Van Wie 1221

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: 12/10/23 Date Permit Application Filed: 12/13/23

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) *** HG Energy II Appalachia is not being notified as they are the Operator of the well pad.*
 Name: HG Energy II Appalachia, LLC **
 Address: 5250 Dupont Road
Parkersburg, WV 26101
 Name: Anthony and Dawn Van Wie
 Address: 2700 Jones Road
Dunkirk, MD 20754

COAL OWNER OR LESSEE
 Name: NA
 Address: _____
 COAL OPERATOR
 Name: NA
 Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
 Name: _____
 Address: _____
 Name: _____
 Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
 Name: NA
 Address: _____

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

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
 Name: BHE GT&S - Attn: Jamie Moore
 Address: 925 White Oaks Blvd
Bridgeport, WV 26330

*Please attach additional forms if necessary

11/08/2024

WW-6A
(8-13)

API NO. 47-
OPERATOR WELL NO. Van Wie 1221 HWH 121
Well Pad Name: Van Wie 1221

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

WW-6A
(8-13)

API NO. 47-
OPERATOR WELL NO. Van Wie 1221 N1H Ia 512H
Well Pad Name: Van Wie 1221

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

Office of the Secretary
OCT 08 2024

WW-6A
(8-13)

API NO. 47- **4704105769**
OPERATOR WELL NO. Van Wie 1221 NHH to 5121
Well Pad Name: Van Wie 1221

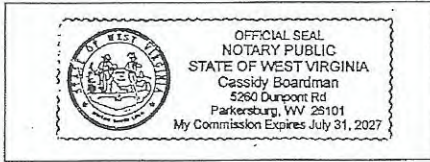
Notice is hereby given by:

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: 304-853-3172

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 of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.



Subscribed and sworn before me this 11th day of December, 2023.

Cassidy Boardman Notary Public

My Commission Expires 7/31/2027

OCT 08 2024

11/08/2024



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

4704105769

January 4, 2024

Anthony and Dawn Van Wie
2700 Jones Road
Dunkirk, MD 20754

RE: Van Wie 1221 N-1H thru S-12H Well Work Permit Applications - Notification
Freemans Creek District, Lewis County
West Virginia

Dear Mr. and Mrs. Van Wie -

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 wells.

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 or email at dwhite@hgenergvllc.com.

Very truly yours,

Diane White

Diane C. White

Enclosures

Office of Oil and Gas
OCT 09 2024
WV DEPARTMENT OF ENVIRONMENTAL PROTECTION

11/08/2024



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

4704105769

January 4, 2024

James Moore
BHE - GT&S
925 White Oaks Blvd
Bridgeport, WV 26330

RE: Van Wie 1221 N-1H thru S-12H Well Work Permit Applications - Notification
Freemans Creek District, Lewis County
West Virginia

Dear Mr. Moore -

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 wells.

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 or email at dwhite@hgenergvllc.com.

Very truly yours,

Diane White

Diane C. White

Enclosures

Office of Oil and Gas
OCT 03 2024
Environmental Protection

11/08/2024

4704105769

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: January 5, 2024 Date of Planned Entry: January 12, 2024

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

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

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

Notice is hereby provided to: * Notice was not sent to HG Energy II Appalachia LLC as they are the Operator of Record

SURFACE OWNER(s)

Name: Anthony and Dawn Van Wie
Address: 2700 Jones Road
Dunkirk, MD 20754

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

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: N/A
Address: _____

MINERAL OWNER(s)

Name: Same as Surface Owners
Address: _____

*please attach additional forms if necessary

Notice is hereby given:

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

| | |
|---------------------------------|--|
| State: <u>West Virginia</u> | Approx. Latitude & Longitude: <u>39.094844 / 80.668480</u> |
| County: <u>Lewis</u> | Public Road Access: <u>CR11 / 3 via Straight Run Road</u> |
| District: <u>Freemans Creek</u> | Watershed: <u>Fink Creek</u> |
| Quadrangle: <u>Vadis</u> | Generally used farm name: <u>Van Wie</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 Appalachia, LLC</u> | Address: <u>5260 Dupont Rd</u> |
| Telephone: <u>304-420-1119</u> | <u>Parkersburg, WV 26101</u> |
| Email: <u>dwhite@hgenergyllc.com</u> <u>Diane White</u> | Facsimile: <u>304-863-2752</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.

OCT 09 2024

11/08/2024

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

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

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

Date of Notice: 01/05/2024 **Date Permit Application Filed:** 01/15/2024

OFFICE OF OIL AND GAS
OCT 03 2024

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

Name: Anthony and Dawn Van Wie
Address: 2700 Jones Road
Dunkirk, MD 20754

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: 528688.6
County: Lewis Northing: 4327353.9
District: Freemans Creek Public Road Access: CR11 / 3 via Straight Run Road
Quadrangle: Vadis WV 7.5' Generally used farm name: Van Wie
Watershed: Fink Creek

This Notice Shall Include:

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

Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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

11/08/2024

WW-6A5
(1/12)

Operator Well No. Van Wie 1221 N-1H to S-12H

6704105769

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

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

Date of Notice: 01/05/2024 Date Permit Application Filed: 01/12/2024

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

CERTIFIED MAIL RETURN RECEIPT REQUESTED HAND DELIVERY

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

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

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

Name: Anthony and Dawn Van Wie
Address: 2700 Jones Road
Dunkirk, MD 20754

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 528668.6
County: Lewis Northing: 4327353.9
District: Freemans Creek Public Road Access: CR 11 / 3 via Straight Run Road
Quadrangle: Vadis WV 7.5' Generally used farm name: Van Wie
Watershed: Fink Creek

This Notice Shall Include:

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

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

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

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11/08/2024

4704105769



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

Office of the District Engineer/Manager
District Four

Post Office Box 4220 · Clarksburg, West Virginia 26302 · (304) 842-1500

Alanna J. Keller, P.E.
Deputy Secretary of Transportation
Deputy Commissioner of Highways

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

December 04, 2023

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 Van Wie 1221, Lewis County
S-10H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit 07-2023-0352 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 11/3 SLS MP 2.941.

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 March 6, 2023. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

A handwritten signature in blue ink, appearing to read "Stephen G. Johnson".

Stephen G. Johnson
Director of Operations



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

4704105769

HG Energy II Appalachia, LLC

List of Frac Additives by Chemical Name and CAS #

Van Wie 1221 Well Pad (N-1H thru S-12H)

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

Original Filed with
 OCT 03 2024
 Environmental Protection Agency

11/08/2024

OPERATOR: HG Energy II Appalachia, LLC WELL NO: Van Wie 1221 S-10H

PAD NAME: Van Wie 1221

REVIEWED BY: Diane White SIGNATURE: Diane White

WELL RESTRICTIONS CHECKLIST

HORIZONTAL 6A WELL

Office of
OCT 08 2024
Environmental

Well Restrictions

- At Least 100 Feet from Pad and LOD (including any E&S Control Feature) to any Perennial Stream, Lake, Pond, Reservoir or Wetland; OR
- DEP Waiver and Permit Conditions
- At Least 300 Feet from Pad and LOD (including any E&S Control Feature) to any Naturally Producing Trout Stream; OR
- DEP Waiver and Permit Conditions
- At Least 1000 Feet from Pad and LOD (including any E&S Control Feature) to any Groundwater Intake or Public Water Supply; OR
- DEP Waiver and Permit Conditions
- At Least 250 Feet from an Existing Water Well or Developed Spring to Well Being Drilled; OR
- Surface Owner Waiver and Recorded with County Clerk, OR
- DEP Variance and Permit Conditions
- At Least 625 Feet from an Occupied Dwelling Structure to Center of the Pad; OR
- Surface Owner Waiver and Recorded with County Clerk, OR
- DEP Variance and Permit Conditions
- At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to the Center of the Pad; OR
- Surface Owner Waiver and Recorded with County Clerk, OR
- DEP Variance and Permit Conditions

