



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Tuesday, May 7, 2019
WELL WORK PERMIT
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for 1208 N-2H
47-033-05953-00-00

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: 1208 N-2H
Farm Name: LINDA & WILLIAM W. BROOKS
U.S. WELL NUMBER: 47-033-05953-00-00
Horizontal 6A New Drill
Date Issued: 5/7/2019

PERMIT CONDITIONS

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

CONDITIONS

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

PERMIT CONDITIONS

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

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

1) Well Operator: HG Energy II Appalachia, L.P.

| | | | |
|------------------|-----------------|--------------|--------------------------|
| <u>494519932</u> | <u>Harrison</u> | <u>Union</u> | <u>West Milford 7.5'</u> |
| Operator ID | County | District | Quadrangle |

2) Operator's Well Number: Nutter 1208 N-2H Well Pad Name: Nutter 1208

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

4) Elevation, current ground: 1162' Elevation, proposed post-construction: 1149'

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

Other _____

(b) If Gas Shallow Deep _____

Horizontal *SOW*

1/28/2019

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 7013'/7064' and 51' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 7050'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 19,910'

11) Proposed Horizontal Leg Length: 12,275'

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

FEB 22 2019

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

14) Approximate Saltwater Depths: 1299', 1675'

WV Department of
Environmental Protection

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

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

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

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

WW-6B
(04/15)

API NO. 47- 33-05953
 OPERATOR WELL NO. Nutter 1208 N-2H
 Well Pad Name: Nutter 1208

18)

CASING AND TUBING PROGRAM

| TYPE | Size (in) | New or Used | Grade | Weight per ft. (lb/ft) | FOOTAGE: For Drilling (ft) | INTERVALS: Left in Well (ft) | CEMENT: Fill-up (Cu. Ft.)/CTS |
|--------------|-----------|-------------|-------|------------------------|----------------------------|------------------------------|-------------------------------|
| Conductor | 30" | New | LS | 157.5 | 120' | 120' | Drilled In |
| Fresh Water | 20" | NEW | J-55 | 94 | 650' | 650' | CTS |
| Coal/Storage | 13 3/8" | NEW | J-55 | 68 | 1890' | 1890' | CTS |
| Intermediate | 9 5/8" | NEW | J-55 | 40 | 2700' | 2700' | CTS |
| Production | 5 1/2" | NEW | P-110 | 23 | 19,909' | 19909' | CTS |
| Tubing | | | | | | | |
| Liners | | | | | | | |

SDW
5/11/2019

| 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 | 20" | 26" | .438 | 2110 | 1200 | Type 1, Class A | 40% excess yield = 1.20, CTS |
| Coal/Storage | 13 3/8" | 17 1/2" | .480 | 3450 | | Type 1/Class A | Lead 40% excess, Tail 0% excess |
| Intermediate | 9 5/8" | 12 1/4" | .395 | 3950 | | Type 1/Class A | Lead 40% excess, Tail 0% excess |
| Production | 5 1/2" | 8 1/2" | .415 | 14520 | 12000 | Type 1/Class A | 20% excess yield = 1.19, tail yield 1.20 |
| Tubing | | | | | | | |
| Liners | | | | | | | |

PACKERS

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

WW-6B
(10/14)

API NO. 47- _____ - _____
OPERATOR WELL NO. Nutter 1208 N-2H
Well Pad Name: Nutter 1208

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 7050 feet. Drill horizontal leg to estimated 12275 lateral length, 19909 TMD. Hydraulically fracture stimulate and be capable of producing from the Marcellus Formation. Should we encounter an unanticipated void in the coal, we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface. We plan to run an ECP above the Gantz/Dominion Storage interval to aid in sealing off and isolating the storage interval.

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

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

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 22.420 acres

22) Area to be disturbed for well pad only, less access road (acres): 15.399 acres

23) Describe centralizer placement for each casing string:

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

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

Conductor - N/A, Casing to be drilled in w/ Dual Rotary Rig
Fresh Water - 15.6 ppg PNE-1 + 3% bwoc CaCl₂ 40% Excess Yield = 1.20, CTS
Coal - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl₂ 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl₂ zero% Excess, CTS
Intermediate - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl₂ 40% Excess, Tail: 15.9 ppg, PNE-1 + 2.5% bwoc CaCl₂, zero% Excess, CTS
Production - Lead: 14.9 ppg POZ/PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170, Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess, Lead Yield=1.19, Tail Yield=1.94, CTS

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25) Proposed borehole conditioning procedures:

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

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*Note: Attach additional sheets as needed.

FEB 22 2019

Nutter 1208 Well Pad (N-1H to N-5H, S-6H to S-10H)

Cement Additives

WV Department of
Environmental Protection

| 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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| 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 | | | | | | | | | |
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| 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 | | | | | | | | | | | | |
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| 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 | | | <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 | Gas Migration | Multi-purpose polymer additive used to control free fluid, fluid loss, rheology, and gas migration. | <table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table> | Ingredient name | % | CAS number | No hazardous ingredient | | | | | | | | | | | | | | |
| Ingredient name | % | CAS number | | | | | | | | | | | | | | | | | | | |
| No hazardous ingredient | | | | | | | | | | | | | | | | | | | | | |
| Poz (Fly Ash) | Base | A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement. | <table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> </tbody> </table> | Ingredient name | % | CAS number | Crystalline silica: Quartz (SiO2) | 5 - 10 | 14808-60-7 | Calcium oxide | 1 - 5 | 1305-78-8 | | | | | | | | | |
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| 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 | | | | | | | | | | | | | | | | | | | |
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| Alkylarylsulfonate amine salt | 1 - 5 | Trade secret. | | | | | | | | | | | | | | | | | | | |
| Polyoxyalkylenes | 0.1 - 1 | Trade secret. | | | | | | | | | | | | | | | | | | | |



**1208 N-2H
Marcellus Shale Horizontal
Harrison County, WV**

| | | | | | | | |
|-------------------------|----------------|----------------------|--|--|---------------------------------|--|--|
| | | 1208 N-2H SHL | | | 14218970.45N 1803605.49E | | |
| Ground Elevation | 1149' | 1208 N-2H LP | | | 14219024.29N 1802356.35E | | |
| Azm | 340.27° | 1208 N-2H BHL | | | 14230578.81N 1798212.32E | | |

| WELLBORE DIAGRAM | HOLE | CASING | GEOLOGY | TOP | BASE | MUD | CEMENT | CENTRALIZERS | CONDITIONING | COMMENTS |
|------------------|-----------------------------|-----------------------------|-----------------------------|-----------------|----------------------|------------------------------|---|---|---|---|
| | 30" | 30" 157.5# LS | Conductor | 0 | 120 | AIR | N/A, Casing to be drilled in w/ Dual Rotary Rig | N/A | Ensure the hole is clean at TD. | Conductor casing = 0.5" wall thickness |
| | 26" | 20" 94# J-55 | Fresh Water | 0 | 135 | AIR | 15.6 ppg PNE-1 + 3% bwoc CaCl 40% Excess Yield=1.20 / CTS | Centralized every 3 joints to surface | Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement. | Surface casing = 0.438" wall thickness Burst=2110 psi |
| | | | Fresh Water | 0 | 650 | | | | | |
| | 17.5" | 13-3/8" 68# J-55 BTC | Kittaning Coal | 810 | 815 | AIR / KCL Salt Polymer | Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS | Bow Spring on every joint <i>*will also be running ECP 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/Big Lime | 1276 / 1317 | 1301 / 1393 | | | | | |
| | | | Injun / Gantz (Storage) | 1393 / 1680 | 1499 / 1740 | | | | | |
| | | | Intermediate 1 | 0 | 1890 | | | | | |
| | 12.25" | 9-5/8" 40# J-55 BTC | Fifty / Thirty Foot | 1800 / 1880 | 1847 / 1892 | AIR / KCL Salt Polymer | Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS | Bow Spring on first 2 joints then every third joint to 100' form surface | Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement. | Intermediate casing = 0.395" wall thickness Burst=3950 psi |
| | | | Gordon Stray / Gordon | 1935 / 2000 | 2000 / 2090 | | | | | |
| | | | 5th Sand | 2185 | 2220 | | | | | |
| | | | Bayard Sand | 2275 | 2310 | | | | | |
| | | | Intermediate 2 | 0 | 2700 | | | | | |
| | 8.5" Vertical | 5-1/2" 23# P-110 HC CDC HTQ | Speechley | 2895 | 2913 | 9.0ppg SOBM | Lead: 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170 Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess Lead Yield=1.19 Tail Yield=1.94 CTS | Run 1 spiral centralizer every 5 joints from the top of the curve to surface. | Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement. | Production casing = 0.415" wall thickness Burst=14520 psi Note:Actual centralizer schedules may be changed due to hole conditions |
| | | | Balltown | 3115 | 3155 | | | | | |
| | | | Benson | 4200 | 4233 | | | | | |
| West Falls | | | 4770 | 6015 | | | | | | |
| 8.5" Curve | | | 5-1/2" 23# P-110 HC CDC HTQ | Rhinestreet | 6015 | 6290 | | 11.5ppg-12.5ppg SOBM | | |
| | | | | Cashaqua | 6290 | 6491 | | | | |
| | | | | Middlesex | 6491 | 6571 | | | | |
| | | | | West River | 6571 | 6664 | | | | |
| | | | | Burkett | 6664 | 6690 | | | | |
| | | | | Tully Limestone | 6690 | 6794 | | | | |
| 8.5" Lateral | 5-1/2" 23# P-110 HC CDC HTQ | Hamilton | 6794 | 7013 | 11.5ppg-12.5ppg SOBM | | | | | |
| | | Marcellus | 7013 | 7064 | | | | | | |
| | | TMD / TVD (Production) | 19909 | 7050 | | | | | | |
| | | | Onondaga | 7064 | | | | | | |

LP @ 7050' TVD / 7630' MD

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

+/-12279' ft Lateral

TD @ +/-7050' TVD
+/-19909' MD

X=centralizers

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List of Frac Additives by Chemical Name and CAS #**Nutter 1208 Well Pad (N-1H to N-5H, S-6H to S-10H)**

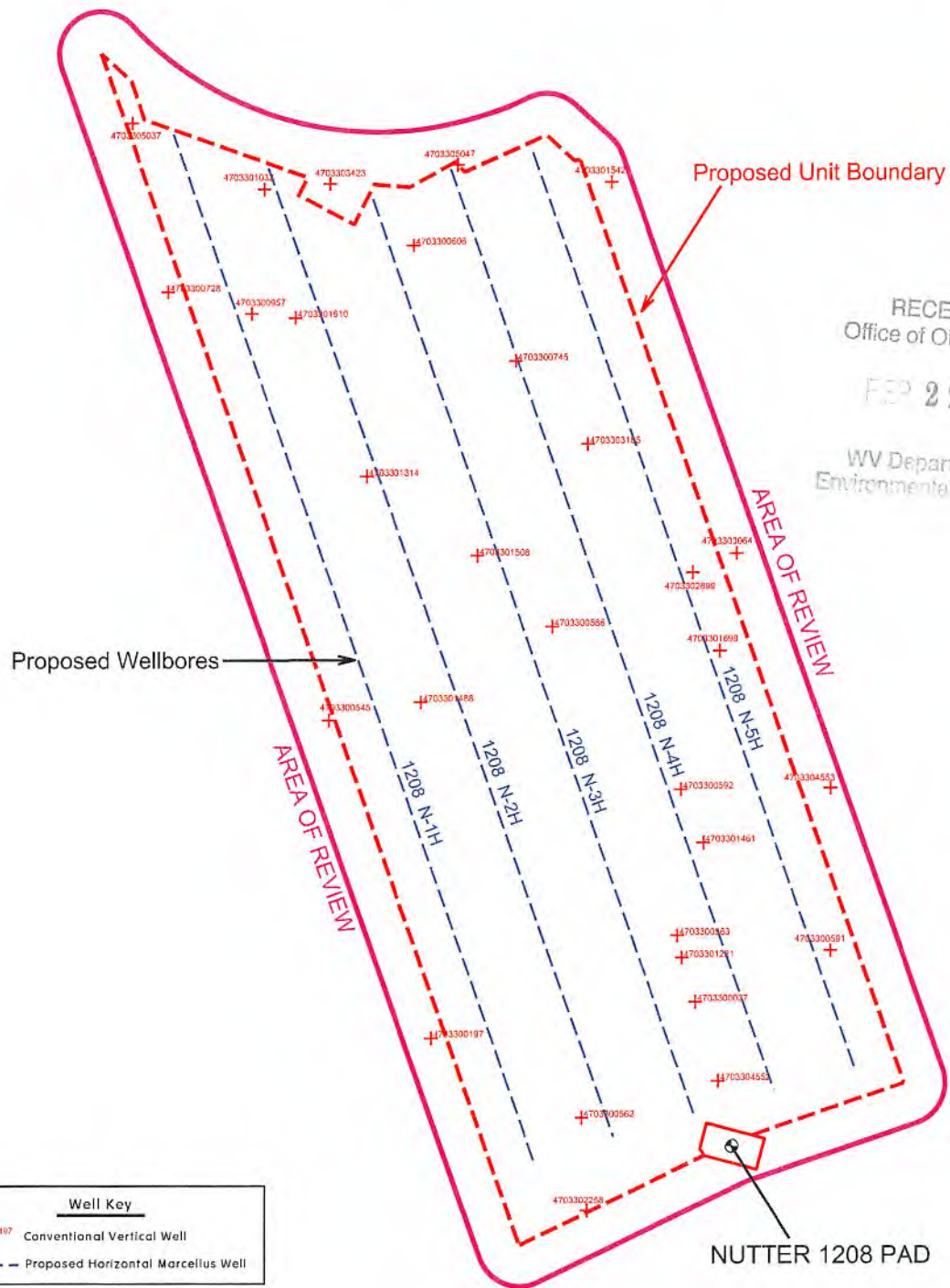
| Chemical Name | CAS # | Multiple CAS #'s |
|-----------------------------|------------|---|
| Pro Shale Slik 405 | Mixture | 68551-12-2 7647-14-5 12125-02-9 64742-47-8 |
| Pro Hib II | Mixture | 68412-54-4 68607-28-3 107-21-1 111-76-2 67-56-1 107-19-7 |
| Silica Sand and Ground Sand | Mixture | 14808-60-7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

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| Well Key | |
|----------|------------------------------------|
| | Conventional Vertical Well |
| | Proposed Horizontal Marcellus Well |

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

Area of Review for:

NUTTER 1208 UNIT

Proposed 1208 N-1H Proposed 1208 N-2H
Proposed 1208 N-3H Proposed 1208 N-4H
Proposed 1208 N-5H

Grant & Union Districts, Harrison County, W.Va.

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

0 1,320'
SCALE: 1" = 1,320'

EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:
NUTTER 1208 NORTH UNIT AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H & N-5H

| CT | API | COUNTY | FARM | OPERATOR NAME | FORMATION NAME | WELL TYPE | TVD | STATUS | LATITUDE | LONGITUDE |
|----|------------|----------|--------------------------|-----------------------------------|----------------------|-----------------|------|---------|-----------|------------|
| 1 | 4703300037 | Harrison | Leeman Maxwell 5 | Dominion Energy Transmission Inc. | Balltown | Storage | 3186 | ACTIVE | 39.157905 | -80.425238 |
| 2 | 4703300197 | Harrison | Leeman Maxwell | Dominion Energy Transmission Inc. | Fifty-foot | Storage | 3216 | ACTIVE | 39.156758 | -80.436644 |
| 3 | 4703300545 | Harrison | Mary Burnside | Dominion Energy Transmission Inc. | Benson | Gas | 4225 | ACTIVE | 39.167206 | -80.440704 |
| 4 | 4703300562 | Harrison | J B Gusman | Dominion Energy Transmission Inc. | Benson | Gas | 4315 | ACTIVE | 39.154132 | -80.430082 |
| 5 | 4703300563 | Harrison | Leeman Maxwell | Dominion Energy Transmission Inc. | Benson | Gas | 4332 | ACTIVE | 39.160087 | -80.42598 |
| 6 | 4703300586 | Harrison | Brooks Vanscoy | Dominion Energy Transmission Inc. | Greenland Gap Frn | Gas | 4316 | ACTIVE | 39.170253 | -80.431202 |
| 7 | 4703300591 | Harrison | William W Broadwater III | Dominion Energy Transmission Inc. | Benson | Gas | 4488 | ACTIVE | 39.159553 | -80.419511 |
| 8 | 4703300592 | Harrison | William Broadwater | Dominion Energy Transmission Inc. | Greenland Gap Frn | Gas | 4382 | ACTIVE | 39.164871 | -80.425798 |
| 9 | 4703300606 | Harrison | Bruce Cayton | Dominion Energy Transmission Inc. | Greenland Gap Frn | Gas | 4225 | ACTIVE | 39.182756 | -80.436977 |
| 10 | 4703300728 | Harrison | Jacob P Post | Dominion Energy Transmission Inc. | Balltown | Gas | 3129 | ACTIVE | 39.181284 | -80.447414 |
| 11 | 4703300745 | Harrison | G W Washburn | Dominion Energy Transmission Inc. | Greenland Gap Frn | Gas | 2765 | ACTIVE | 39.178961 | -80.432692 |
| 12 | 4703300957 | Harrison | O E Washburn | EQT Production Co. | Benson | Gas | 4234 | ACTIVE | 39.180558 | -80.443873 |
| 13 | 4703301032 | Harrison | Jacob P Post | EQT Production Co. | Benson | Gas | 4265 | ACTIVE | 39.184622 | -80.443314 |
| 14 | 4703301221 | Harrison | William W Broadwater Jr | Dominion Energy Transmission Inc. | Greenland Gap Frn | Gas | 4415 | ACTIVE | 39.159357 | -80.425797 |
| 15 | 4703301314 | Harrison | W Burnside | Dominion Energy Transmission Inc. | Fifth | Gas w/ Oil Show | 2051 | ACTIVE | 39.175188 | -80.439027 |
| 16 | 4703301461 | Harrison | Broadwater CW-130 | Dominion Energy Transmission Inc. | Gantz | Storage | 1836 | ACTIVE | 39.16313 | -80.424865 |
| 17 | 4703301488 | Harrison | N Post | Dominion Energy Transmission Inc. | UNKNOWN | Gas | - | ACTIVE | 39.167786 | -80.436792 |
| 18 | 4703301508 | Harrison | J Cheuvront | Dominion Energy Transmission Inc. | UNKNOWN | Gas | - | ACTIVE | 39.172575 | -80.434369 |
| 19 | 4703301542 | Harrison | Stephen Hinkle | Ross & Wharton Gas Co, LLC | Greenland Gap Frn | Gas | 2799 | ACTIVE | 39.184786 | -80.425592 |
| 20 | 4703301610 | Harrison | W Burnside | Dominion Energy Transmission Inc. | Fifth | Gas | 2102 | PLUGGED | 39.180413 | -80.442009 |
| 21 | 4703301698 | Harrison | L Maxwell | Dominion Energy Transmission Inc. | Benson | Gas | 4516 | ACTIVE | 39.169414 | -80.424118 |
| 22 | 4703302258 | Harrison | J B Gusman | Dominion Energy Transmission Inc. | UNKNOWN | Storage | 1760 | ACTIVE | 39.151084 | -80.423896 |
| 23 | 4703302899 | Harrison | K M Patton/R Reed 1 | Dominion Energy Transmission Inc. | Greenland Gap Frn | Gas | 3011 | PLUGGED | 39.171995 | -80.422239 |
| 24 | 4703303064 | Harrison | J Cheuvront (CW-154) | Dominion Energy Transmission Inc. | Greenland Gap Frn | Gas | 2933 | PLUGGED | 39.172605 | -80.423373 |
| 25 | 4703303185 | Harrison | Joseph Cheuvront | Dominion Energy Transmission Inc. | Hampshire Grp | Gas | 1749 | ACTIVE | 39.176214 | -80.423658 |
| 26 | 4703303423 | Harrison | Thad Curry | Dominion Energy Transmission Inc. | Hampshire Grp | Observation | 1980 | PLUGGED | 39.184786 | -80.442303 |
| 27 | 4703304552 | Harrison | Ill | Dominion Energy Transmission Inc. | Misc Sands-BNSN/BRLR | Gas | 4480 | ACTIVE | 39.155302 | -80.419461 |
| 28 | 4703304553 | Harrison | Linda J Maxwell | Dominion Energy Transmission Inc. | Misc Sands-BNSN/BRLR | Gas | 4638 | ACTIVE | 39.164873 | -80.418904 |
| 29 | 4703305037 | Harrison | Post Heritage LLC | Dominion Energy Transmission Inc. | Greenland Gap Frn | Gas | 5126 | ACTIVE | 39.186816 | -80.448904 |
| 30 | 4703305047 | Harrison | Robert M Lewis/C J Lewis | Alliance Petroleum Corp. | Greenland Gap Frn | Gas | 4418 | ACTIVE | 39.185366 | -80.435114 |

SOURCE: WVGES DATASET (2017) and WVDEP WEBSITE

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33 0516/2019

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

December 5, 2018

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

RE: Area of Review – Nutter 1208 Well Pad (N-1H to N-5H)
Hydraulic Fracturing Notice

Dear Sir:

HG Energy II Appalachia, LLC, has developed a Marcellus pad (Nutter 1208 pad) located in Harrison County, WV. As an owner or operator of a conventional natural gas well in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 7050' TVD) and existing conventional natural gas wells.

HG Energy anticipates conducting hydraulic fracturing of the Nutter 1208 Pad during the fourth quarter of 2019. We have identified conventional natural gas wells operated by your company within 500' of one of the newly planned laterals (Nutter 1208 N-1H). A plat for the well is attached.

We recommend conventional well operators conduct the following activities before, during and after the fracturing operation.

1. Inspect surface equipment prior to fracturing to establish integrity and well conditions.
2. Observe wells closely during and after fracturing and monitor for abnormal increases in gas, water or pressure.
3. Inspect or install master valves rated at 3,000 psi or other necessary equipment for wellhead integrity.
4. Notify the OOG and HG Energy if any changes in water, gas production, pressure or other anomalies are identified.

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

Sincerely,

Diane White

Diane White

Enclosure

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

33 05953
05/10/2019

33 05953

December 5, 2018

EQT Production Company
115 Professional Place
Bridgeport, WV 26330

RE: Area of Review – Nutter 1208 Well Pad (N-1H to N-5H)
Hydraulic Fracturing Notice

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Sincerely,

Diane White

Enclosure

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

33 05 05/10/2019
33 05 953

December 5, 2018

Alliance Petroleum Corporation
67 Collins Run Road
Glenville, WV 26351

RE: Area of Review – Nutter 1208 Well Pad (N-1H to N-5H)
Hydraulic Fracturing Notice

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Sincerely,

Diane White

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

33 059 53 05/10/2019

December 5, 2018

Ross & Wharton Gas Company
29 Morton Avenue
Buckhannon, WV 26201

RE: Area of Review – Nutter 1208 Well Pad (N-1H to N-5H)
Hydraulic Fracturing Notice

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Sincerely,

Diane White

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WW-9
(4/16)

API Number 47 - 33-05953

Operator's Well No. Nutter 1208 N-2H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name HG Energy II Appalachia, LLC OP Code 494501907

Watershed (HUC 10) Middle West Fork Creek Quadrangle West Milford 7.5

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: NA

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
 - Underground Injection (UIC Permit Number _____)
 - Reuse (at API Number TBD - At next anticipated well)
 - Off Site Disposal (Supply form WW-9 for disposal location)
 - Other (Explain _____)
- SDW
5/11/2019*

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, SDBM, Horizontal - SDBM

-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

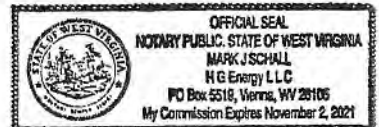
Company Official (Typed Name) Diane White

Company Official Title Agent

Subscribed and sworn before me this 17th day of April, 2019

[Signature] Notary Public

My commission expires 11/2/2021



33 05953

33 05953 05/10/2019
Operator's Well No. Nutter 1208 N-3H

Form WW-9

HG Energy II Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 22.420 Prevegetation pH _____

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

Fertilizer type 10-20-20

Fertilizer amount _____ 500 lbs/acre

Mulch Hay _____ 2 Tons/acre

Seed Mixtures

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

Maintain E&S controls through the drilling and completion process

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: SLO Wandt

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

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

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Environmental Protection

Title: Oil & Gas Inspector

Date: 1/28/2019

Field Reviewed? Yes No

33 05953

Cuttings Disposal/Site Water

Cuttings -Haul off Company:

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

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

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

Disposal Locations:

Apex Environmental, LLC Permit # 06-08438
11 County Road 78
Amsterdam, OH 43903
740-543-4889

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

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

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

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

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

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

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

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

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

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

05/10/2019

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

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

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

Water Haul off Companies:

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

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

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

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

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

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

Nuverra Environmental Solutions
 11942 Veterans Memorial Highway
 Masontown, WV 26542

Equipment Transport
 1 Tyler Court
 Carlisle, PA 17015

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

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

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

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

Disposal Locations:

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

Nichlos 1-A (SWIW #18)
 Permit # 3862
 300 Cherrington Pkwy, Suite 200
 Coraopolis, PA 15108
 412-329-7275

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

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

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

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

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WV Department of
 Environmental Protection

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

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

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

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

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

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

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

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

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

05/10/2019

33 05953

RECEIVED
Office of Oil and Gas

FEB 22 2019

WV Department of
Environmental Protection

Reclamation Plan For:

NUTTER 1208 PAD

NUTTER 1208 PAD

Wm. & Linda
Brodwater
TM 425, Parcel 31

Fill Area



N-4H
N-5H
N-3H
N-2H
N-1H

~380'

S-10H
S-9H
S-8H
S-7H

40K BBL
AST

Topsoil
Stockpiles

Lisa M. Nutter
(Carol Feldt L.E.)
TM 445, Parcel 1

~3,600' of
Proposed
Access Road
(See Construction
Plan for Detail)

Lisa M. Nutter
TM 445, Parcel 10

Notes:

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

RECEIVED
Office of Oil and Gas

FEB 23 2019

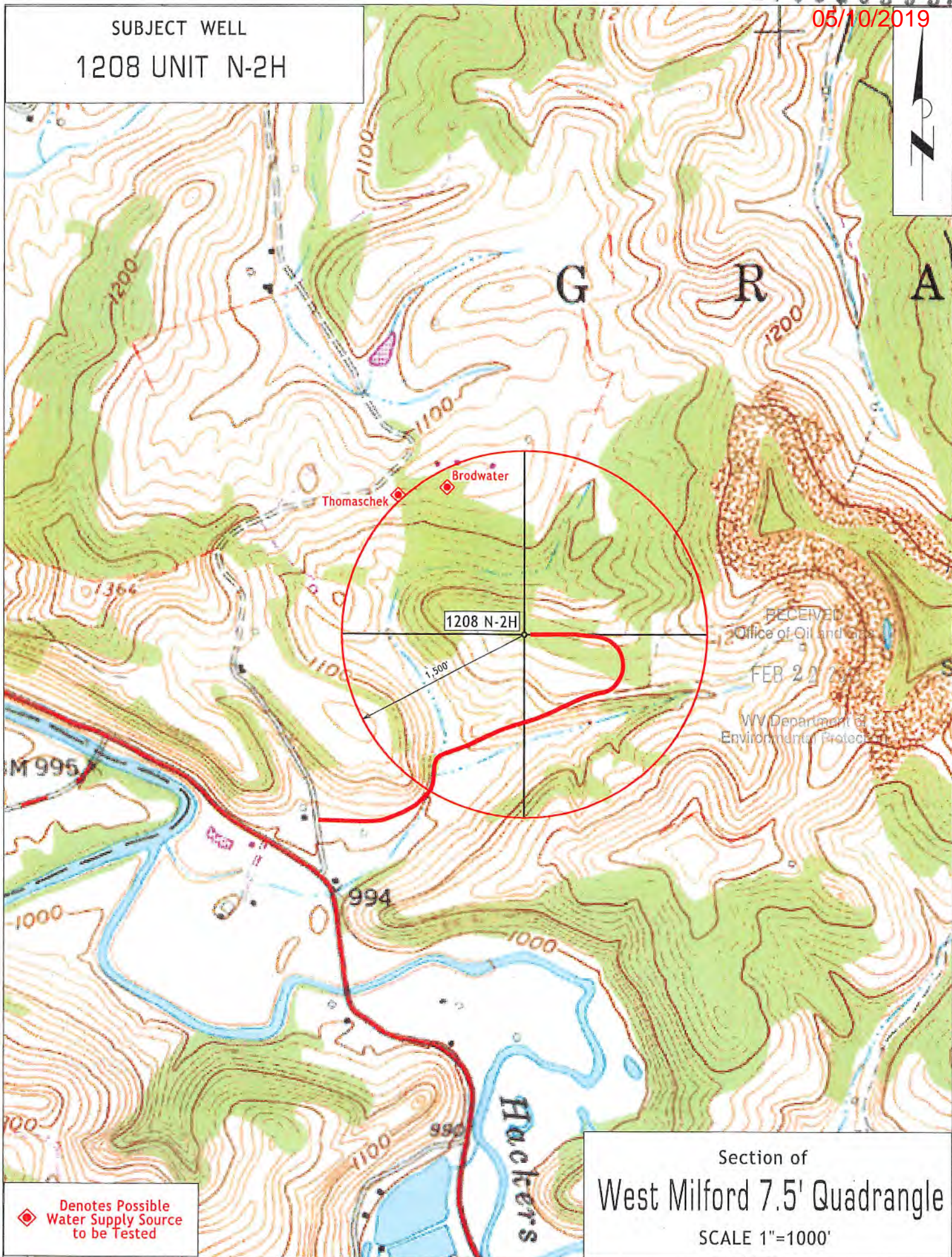
WV Department of
Environmental Protection

05/10/2019

33 0 5 9 5 3

05/10/2019

SUBJECT WELL
1208 UNIT N-2H

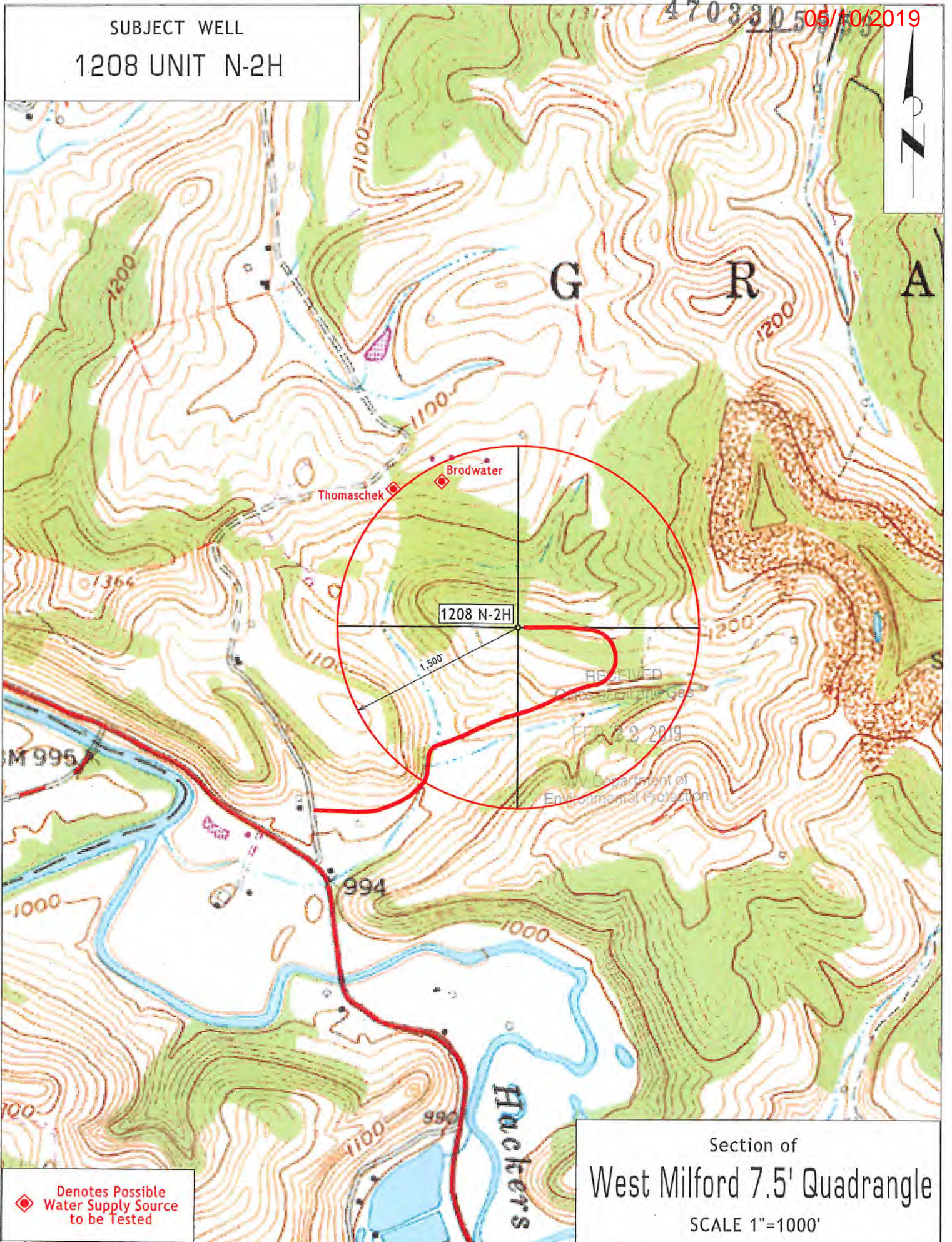


◆ Denotes Possible Water Supply Source to be Tested

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

SUBJECT WELL
1208 UNIT N-2H

4703305 05/10/2019



◆ Denotes Possible Water Supply Source to be Tested

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

WW-6A1
(5/13)

Operator's Well No. Nutter 1208 N-2H

**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****

RECEIVED
Office of Oil and Gas

FEB 22 2019

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

WV Department of
Environmental Protection

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
Well No. 1208 N-2H

Page 1 of 3

7,546' to Bottom Hole
2,227' to Top Hole
BTM LATITUDE 39 - 12 - 30
TOP LATITUDE 39 - 10 - 00

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, P.S. 2070

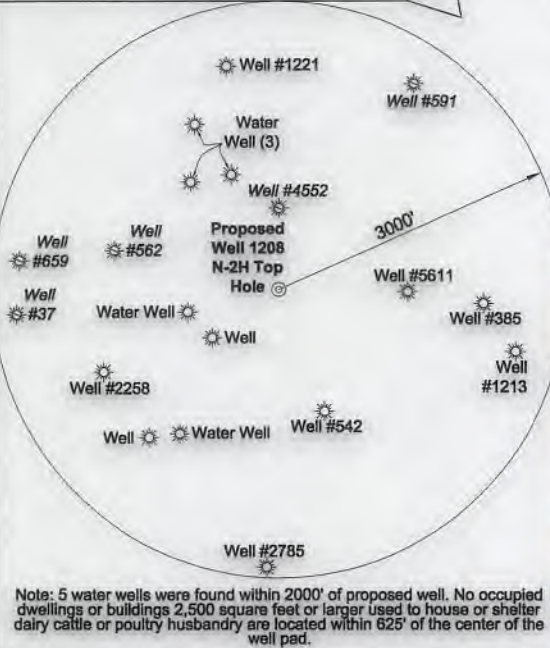
05/10/2019

| Tag | Bearing | Dist. |
|-----|------------|----------|
| L1 | S 37°21' E | 1,217.2' |
| L2 | S 21°53' E | 1,230.3' |
| L3 | N 89°37' W | 1,352.0' |
| L4 | N 67°27' W | 1,180.0' |
| L5 | N 87°32' W | 1,250.3' |



Notes:
Well No. 1208 N-2H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,218,970.45' E: 1,803,605.49'
Landing Point Coordinates
N: 14,219,024.29' E: 1,802,356.35'
Bottom Hole Coordinates
N: 14,230,578.81' E: 1,798,212.32'

Notes: Well No. 1208 N-2H
West Virginia Coordinate System of 1927, South Zone based upon Differential GPS Measurements.
Top Hole coordinates Bottom Hole coordinates
Latitude: 39°09'11.89" Longitude: 80°25'28.29" Latitude: 39°11'06.80" Longitude: 80°26'35.86"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,333,950.861m E: 549,740.052m N: 4,337,489.096m E: 548,096.211m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.



Note: 5 water wells were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.

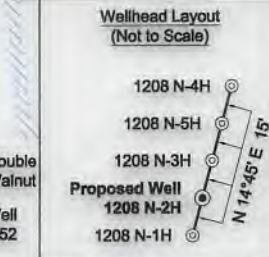
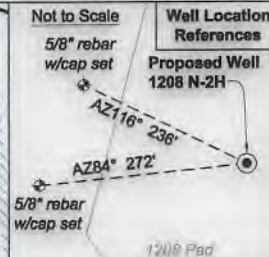
| ID | Lease |
|------|---------------------------|
| 1 | Jerome B. Gusman |
| 2 | Leeman B. Maxwell Heirs |
| 3 | William Burnside, et al |
| 4 | Oria Myers, et al |
| 5 | Claudia Hacker, et al |
| 6 | Leeman B. Maxwell Heirs |
| 10 | Rebecca D. Reed, et al |
| 11 | David Scott, et al |
| 12 | Nathan Post, et al |
| 13 | William Burnside, et al |
| 14 | Joseph Chevront, et al |
| 16 | Howard W. Vanscoy, et al |
| 18 | George W. Washburn, et al |
| 19 | Lloyd Washburn, et al |
| 21 | Olga E. Washburn, et ux |
| 21.2 | HG Energy II 108 |
| 21.3 | HG Energy II 109 |
| 21.4 | HG Energy II 110 |
| 22 | J.P. Post & C.F. Post |
| 23 | Fee |



SEAL

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.)
- Interior surface tracts (approx.)



FILE NO: 195-36-G-18
DRAWING NO: 1208 N-2H Well Plat
SCALE: 1" = 1500'
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: January 24 20 19
OPERATOR'S WELL NO. 1208 N-2H
API WELL NO
47 - 033 - 05953
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,149' WATERSHED: Middle West Fork Creek
DISTRICT: Grant / Union
SURFACE OWNER: Linda & William W. Brodwater III
ROYALTY OWNER: Leeman B. Maxwell Heirs, et al LEASE NO: ACREAGE: 247.84
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ 7,050' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,910' MD

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

| No. | TM / Par | Owner | Bk / Pg | Ac. |
|-----|-------------|--|-------------|--------|
| 93 | 2901 / 115 | John & Dreama Horner | 1267 / 953 | 0.172 |
| | 2901 / 114 | | | 0.102 |
| 92 | 2901 / 84 | Mary E. James | 1223 / 1017 | 0.22 |
| 91 | 404 / 45 | Melvin & Mary E. James | 1064 / 131 | 0.13 |
| 90 | 2901 / 160 | Adam Lee Carder | WB171 / 954 | 0.172 |
| | 2901 / 159 | | | 0.172 |
| | 2901 / 137 | | | 0.406 |
| 89 | 2901 / 136 | Chun H. Underwood | 1299 / 1190 | 0.17 |
| 88 | 404 / 37 | Larry & Rebecca Myers | WB148/1089 | 18.10 |
| 87 | 2901 / 135 | Jon S. & Wendy J. Skinner | 1354 / 531 | 0.17 |
| | 2901 / 134 | | | 0.16 |
| 86 | 2901 / 133 | Charles E. Steffich | 1523 / 872 | 0.16 |
| 85 | 2901 / 140 | Elma Toothman & Cynthia Marsh, et al | F094 / 606 | 0.344 |
| 84 | 2901 / 113 | Gary Michael Ward & Eugene B. Ward Jr. | WB139 / 736 | 0.22 |
| | 2901 / 112 | | | 0.17 |
| | 2901 / 111 | | | 0.10 |
| | 2901 / 158 | | | 0.172 |
| 83 | 2901 / 157 | James E. & Karen Weekley | 1252 / 881 | 0.172 |
| | 2901 / 156 | | | 0.172 |
| 82 | 2901 / 155 | Rebecca A. Bennett | 1463 / 987 | 0.172 |
| | 2901 / 154 | | 1495 / 528 | Lot 72 |
| 81 | 2901 / 153 | Kimberly A. Taylor | 1283 / 383 | 0.23 |
| | 2901 / 83 | | | - |
| 80 | 2901 / 82 | Ronzel C. Sandra K. Richards | 1077 / 1129 | 0.165 |
| | 2901 / 81 | | | 0.191 |
| | 2901 / 80 | | | 0.172 |
| 79 | 2901 / 79 | Robert D. Wilt | 1114 / 601 | 0.172 |
| | 2901 / 78 | | | 0.172 |
| | 2901 / 110 | | | 0.241 |
| 78 | 2901 / 109 | Jason & Rebecca Riggleman | 1242 / 968 | 0.172 |
| | 2901 / 77 | | | 0.172 |
| | 2901 / 76 | | | 0.172 |
| 77 | 404 / 55.14 | Jason & Rebecca Riggleman | 1391 / 860 | 0.78 |
| 76 | 404 / 46 | Annette C. Nichols | 1370 / 901 | 1.68 |
| 75 | 404 / 55.5 | Brian W. Myers | 1439 / 1139 | 0.75 |
| | 404 / 55.10 | | | 0.22 |
| 74 | 404 / 55.9 | Larry & Rebecca Myers | 1165 / 749 | 0.07 |
| | 404 / 55.4 | | | 0.43 |
| 73 | 404 / 55.6 | Brian W. Myers | 1439 / 1139 | 0.63 |
| | 404 / 55.3 | | | 0.42 |
| 72 | 404 / 54 | Jackson Lodge 35 A.F. & A.M. | 798 / 235 | 1.35 |
| | 404 / 53 | | | 0.35 |
| | 404 / 52 | | | 2.90 |
| 71 | 404 / 55 | Larry & Rebecca Myers | WB148/1089 | 54.74 |

| No. | TM / Par | Owner | Bk / Pg | Ac. |
|-----|-------------|--------------------------------------|--------------|-----------|
| 70 | 404 / 55.2 | Michael J. & Sandra R. Bode | 1022 / 193 | 0.51 |
| 69 | 404 / 47 | Bethel ME Church | 828 / 539 | 0.31 |
| 68 | 404 / 55.8 | Grant Union PSD | 1164 / 449 | 0.02 |
| 67 | 404 / 55.7 | Bethel ME Church | 1191 / 266 | 0.21 |
| 66 | 404 / 48 | Trustees of Bethel Methodist Church | 649 / 350 | 0.46 |
| 65 | 404 / 55.1 | Terence L. Washburn | 1332 / 1140 | 42.37 |
| 64 | 404 / 55.12 | Bethel ME Church | 1191 / 266 | 2.47 |
| 63 | 2003 / 1 | Donovan F. Randolph Estates, et al | W183 / 397 | 0.06 |
| | 2003 / 2 | | | 0.84 |
| 62 | 404 / 50 | Billy L. & Barbara E. Nutter | 953 / 526 | 3.77 |
| 61 | 2003 / 10 | L&F Gervelia LLC | 1444 / 1080 | 0.624 |
| 60 | 2003 / 13 | Gordon Somerville | 1584 / 483 | 0.72 |
| 59 | 2003 / 15 | UNKNOWN | - / - | Lot 20 |
| | 2003 / 5 | | | 0.19 |
| 58 | 2003 / 12 | Valma Steif, et al | F095 / 796 | 0.15 |
| | 2003 / 17 | | | Lot 22 |
| | 2003 / 19 | | | Lot 24 |
| 57 | 2003 / 26 | Robert Langford, et al | F116 / 280 | 0.19 |
| 56 | 2003 / 24 | Edra B. Cox | WB117 / 12 | 0.18 |
| | 2003 / 22 | | | 0.18 |
| | 2003 / 23 | | | Lot 28 |
| 55 | 2003 / 21 | | | Lot 26 |
| 54 | 2003 / 28 | Daniel C. Cox | 1246 / 1144 | 0.19 |
| 53 | 2003 / 32 | Mary & Ronnie Garrett | 1317 / 285 | 0.19 |
| 52 | 2003 / 29 | William & Grace Preece | 1061 / 1168 | 3.11 |
| | 2003 / 35 | | | 0.53 |
| | 2003 / 34 | | | 0.19 |
| 51 | 2003 / 33 | Brian & Kelli Rhoades | 1522 / 736 | 0.19 |
| | 2003 / 31 | | | Lot 35 |
| | 2003 / 30 | | | Lot 34 |
| | 2003 / 27 | | | Lot 32 |
| | 2003 / 25 | | | Lot 30 |
| 50 | 2003 / 63 | Brian & Kelli Rhoades | 1311 / 352 | 0.31 |
| 49 | 2003 / 62 | | | 0.25 |
| 48 | 2003 / 61 | Nora Perrine | 1165 / 171 | 0.24 |
| 47 | 2003 / 60 | | 1165 / 165 | 0.23 |
| 46 | 2003 / 59 | Roger & Diana Hurst | 1004 / 948 | 0.30 |
| 45 | 2003 / 58 | Donna Randolph | 1473 / 409 | 0.34 |
| 44 | 2003 / 56 | Melinda Bibbee | 1498 / 951 | 0.71 |
| 43 | 2003 / 55 | James S. Murphy | 1563 / 672 | 2.06 |
| 42 | 2003 / 54 | Glenn Kirkpatrick | 1454 / 295 | 0.32 |
| 41 | 2003 / 54.1 | Carl & Carolyn James | 999 / 805 | 0.23 |
| 40 | 2003 / 53 | Jason & Teresa Allen | 1345 / 808 | 0.56 |
| 39 | 2003 / 52 | George & Madge Hennen | 995 / 738 | 0.34 |
| 38 | 2003 / 51 | | 986 / 728 | 0.38 |
| 37 | 2003 / 50 | Heather J. & David L. Smallwood II | 1408 / 638 | 0.33 |
| 36 | 2003 / 49 | Albert Buzzelli | 1295 / 507 | 0.30 |
| 35 | 2003 / 48 | Kevin P. Barker | 1336 / 633 | 0.346 |
| 34 | 2003 / 47 | Howard D. & Judith J. Swick | 1015 / 986 | 0.27 |
| 33 | 2003 / 46 | | 1167 / 874 | p/o Lot L |
| 32 | 2003 / 46.1 | Vivetta Carter | 1340 / 747 | 0.27 |
| 31 | 2003 / 45 | Jonathan E. Bailey | 1553 / 197 | 0.484 |
| 30 | 2003 / 14.3 | State of West Virginia | 1356 / 817 | 0.559 |
| 29 | 2003 / 14 | Ernest D. Burton | 1558 / 413 | 3.81 |
| 28 | 2003 / 14.1 | Dortha L. Hamrick | 896 / 41 | 0.38 |
| 27 | 405 / 75 | William Michael McDonald | 1377 / 99 | 202.18 |
| 26 | 2003 / 38 | Deborah R. Fowler | 1529 / 428 | 0.36 |
| 25 | 2003 / 38 | | 1384 / 438 | 0.77 |
| 24 | 2003 / 45 | Jack Ewart, et ux Living Trust | 1557 / 1005 | 0.29 |
| 23 | 2003 / 41 | | | 0.19 |
| 22 | 2003 / 39 | | | 0.17 |
| 21 | 2003 / 40 | | | 0.119 |
| 20 | 2003 / 40.1 | Christan & Katherine Meeker | 1537 / 523 | 1.25 |
| 19 | 2003 / 64 | | | 2.96 |
| 18 | 2003 / 65 | | | 2.33 |
| 17 | 424 / 5 | Joseph H. Mason | WB87 / 514 | 51.33 |
| 16 | 424 / 10 | Joseph H. Mason & Dedire Mason Brown | WB119/1137 | 22.25 |
| 15 | 424 / 11.1 | Eric A. & Alana N. Burnside | 1365 / 1089 | 13.92 |
| 14 | 425 / 1 | Joel B. Shuman, et al | WB 166 / 472 | 89.00 |
| 13 | 424 / 30.1 | John & Paula Zirkle | 1323 / 665 | 45.62 |
| 12 | 424 / 31 | Chris & Misty Montgomery | 1449 / 358 | 15.30 |
| 11 | 424 / 52.3 | Robert J. Brightbill | 1560 / 293 | 4.54 |
| 10 | 425 / 31.3 | Gary S. & Melinda M. Brodwater | 1354 / 175 | 2.00 |
| 9 | 424 / 52.1 | Robert J. Brightbill | 1560 / 293 | 139.98 |
| 8 | 424 / 52.2 | David Keesucker | 1533 / 1283 | 2.38 |
| 7 | 424 / 52 | Bernice A. Keesucker | 1186 / 552 | 2.17 |
| 6 | 425 / 31.1 | Dona R. & David R. Scarff | 1360 / 652 | 1.00 |
| 5 | 425 / 31.2 | Linda & William W. Brodwater III | 1343 / 1279 | 1.16 |
| 4 | 445 / 1 | | - / - | 87.78 |
| 3 | 445 / 10 | Lisa M. Nutter | WB 687 / 445 | 66.87 |
| 2 | 445 / 2 | | | 84.57 |
| 1 | 425 / 31 | Linda & William W. Brodwater III | 1410 / 1045 | 247.84 |



FILE NO: 195-36-G-18
DRAWING NO: 1208 N-2H Well Plat
SCALE: 1" = 1500'
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: January 24 20 19
OPERATOR'S WELL NO. 1208 N-2H
API WELL NO
47 - 033 - 05953 H6A
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,149' WATERSHED: Middle West Fork Creek

QUADRANGLE: West Milford

DISTRICT: Grant / Union

COUNTY: Harrison

SURFACE OWNER: Linda & William W. Brodwater III

ACREAGE: 200

ROYALTY OWNER: Leeman B. Maxwell Heirs, et al

LEASE NO: ACREAGE: 247.84

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____ 7,050' TVD

PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,910' MD

WELL OPERATOR: HG Energy II Appalachia, LLC

DESIGNATED AGENT: Diane C. White

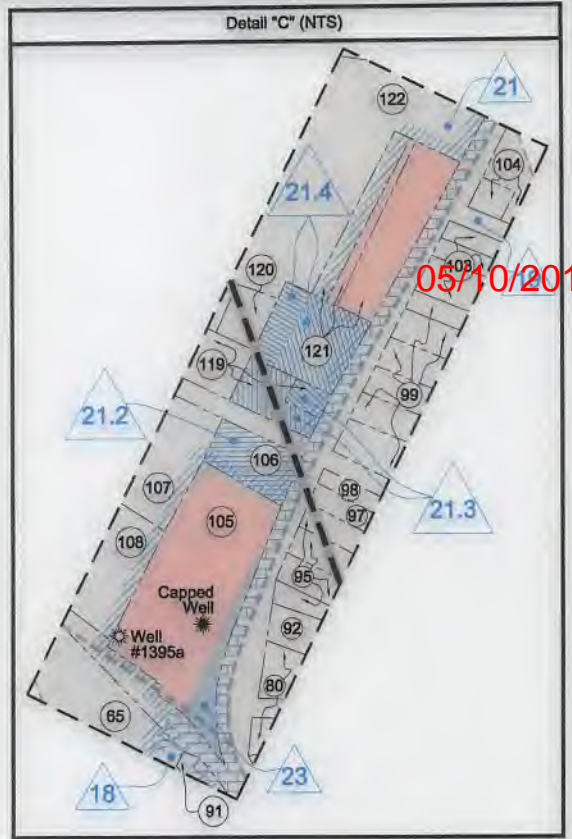
ADDRESS: 5260 Dupont Road

ADDRESS: 5260 Dupont Road

Parkersburg, WV 26101

Parkersburg, WV 26101

| No. | TM / Par | Owner | Bk / Pg | Ac. |
|--------------|--------------|--|-------------|-------------------------|
| 149 | 425 / 33.5 | Shawn & Ashley B. SanJulian | 1512 / 978 | 5.90 |
| 148 | 425 / 32 | Terri L. Winters | 1448 / 74 | 2.00 |
| 147 | 404 / 32.5 | Richard P. & Carol L. Rapping | 1399 / 71 | 12.70 |
| 146 | 2901 / 33 | Rebecca L. & Robert C. Morris | 1330 / 450 | 0.16 |
| 2901 / 32 | 0.15 | | | |
| 2901 / 34 | 0.13 | | | |
| 2901 / 23 | 0.15 | | | |
| 2901 / 22 | 0.16 | | | |
| 145 | 2901 / 21 | Mary Ann Tiano | 932 / 456 | 0.15 |
| 2901 / 20 | 0.15 | | | |
| 2901 / 19 | 0.12 | | | |
| 404 / 8 | 14.86 | | | |
| 144 | 2901 / 190 | Trudy L. & Paul F. Noechel Jr. | 1384 / 1264 | 0.535 |
| 143 | 2901 / 185 | Brian Allen Barker | 1331 / 499 | 0.50 |
| 142 | 2901 / 182 | Serenity Hope LLC | 1458 / 762 | 0.50 |
| 141 | 2901 / 195.1 | Ronzel C. & Sandra K. Richards | 1282 / 548 | 0.55 |
| 2901 / 201.1 | 0.35 | | | |
| 140 | 2901 / 17.6 | Richard D. & Melissa S. Grimm | 1426 / 49 | 0.55 |
| 139 | 2901 / 17 | Doris & Charles Freeman Sr. | 1495 / 989 | 0.41 |
| 138 | 2901 / 17.4 | Aaron Sharps & Jessica Wolfe | 1540 / 1289 | 0.52 |
| 137 | 2901 / 17.1 | Dominion Transmission Inc. | A1 / 362 | 0.66 |
| 136 | 2901 / 17.2 | Thomas & Kristie Wardelle | 1542 / 351 | 0.208 |
| 2901 / 205 | 0.544 | | | |
| 2901 / 206 | 0.48 | | | |
| 135 | 2901 / 207 | Sandra K. & Ersel E. Mogan Jr. | 1332 / 1114 | 0.49 |
| 134 | 2901 / 208 | James & Megan Williams | 1512 / 262 | 0.50 |
| 133 | 2901 / 217 | Edward & Loretta McElwee | 1217 / 292 | 0.50 |
| 132 | 2901 / 219.2 | Ryan & Sara Amstone | 1402 / 603 | 1.19 |
| 131 | 2901 / 219.1 | Warren E. Davis | 1594 / 739 | 0.40 |
| 130 | 2901 / 212 | Andrew & Denise Bellerose | 1558 / 989 | 0.41 |
| 129 | 2901 / 211 | Christopher & Rachel Hurst | 1329 / 972 | 0.43 |
| 128 | 2901 / 210 | Zachary W. & Karl A. Henry | 1557 / 1216 | 0.47 |
| 127 | 2901 / 209 | Earl R. & Kathy L. Langley | 1209 / 612 | 0.47 |
| 126 | 2901 / 221 | Gene Edward & Linda Carole Cox | 1087 / 950 | 1.25 |
| 2901 / 220 | 0.82 | | | |
| 125 | 2901 / 216 | Christopher & Rachel Hurst | 1329 / 972 | 0.43 |
| 124 | 2901 / 213 | Bernice S. Shook | 1435 / 886 | 0.540 |
| 123 | 2901 / 215 | Michael Price | 1398 / 915 | 0.40 |
| 122 | 2901 / 219 | Sharon M. Johnson, Trustee of Oleta M. Post Irrev. Trust | 1576 / 818 | 19.00 |
| 2901 / 16 | 0.33 | | | |
| 121 | 2901 / 14 | June D. Courtney | 181 / 958 | 0.10 |
| 2901 / 10 | 0.57 | | | |
| 120 | 2901 / 200.1 | | | William & June Courtney |
| 119 | 2901 / 9 | Trustees of Jackson Lodge 35 | 360 / 11 | 0.07 |
| 2901 / 8 | 0.16 | | | |
| 118 | 2901 / 199 | | 1044 / 1036 | 0.172 |
| 118 | 2901 / 200 | Beverly K. Rinehart | 1274 / 1176 | 0.45 |
| 117 | 2901 / 204 | Joyce A. Pristavec | 1123 / 626 | 0.430 |
| 116 | 2901 / 203 | Randall R. & Debra L. Stover | 1132 / 76 | 0.387 |
| 115 | 2901 / 197 | Brian & Karrell A. Vernon | 1226 / 350 | 0.53 |
| 114 | 404 / 32.9 | Patricia R. & William T. Douglass | 1399 / 93 | 11.90 |
| 113 | 404 / 33.2 | Richard E. Lawrence | 1016 / 123 | 1.68 |
| 112 | 2901 / 202 | Kenneth R. & Helen M. Queen | 1486 / 488 | 0.56 |
| 111 | 2901 / 194 | Frank R. & Shelby J. Costello | 1374 / 207 | 1.75 |
| 110 | 2901 / 196 | Eugene R. & Lisa D. Messer | 1246 / 593 | 0.51 |
| 109 | 2901 / 201 | Judith Ann Carlin | 1314 / 338 | 0.51 |
| 108 | 2901 / 195 | Jennifer L. & David K. Downward | 1410 / 140 | 0.56 |
| 107 | 2901 / 198 | Doyle L. & Rebecca J. Puckett | 1461 / 916 | 0.50 |
| 106 | 2901 / 7 | Robert J. Hitt & Amanda Jo Hitt | 1594 / 742 | 0.26 |
| 105 | 2901 / 3 | Wilann Ariene Bise 99% Int. & Rebecca Jane Puckett 1% Int. | 1437 / 432 | 1.50 |
| 104 | 2901 / 100 | Kathryn Burnside | 1577 / 314 | 0.64 |
| 2901 / 99 | 0.06 | | | |
| 2901 / 98 | 0.120 | | | |
| 103 | 2901 / 97 | Walter & Rebecca Mick | 1326 / 653 | 0.128 |
| 2901 / 96 | 0.248 | | | |
| 102 | 2901 / 127 | Rhonda & Roy Martin | 1580 / 233 | 0.344 |
| 101 | 2901 / 125 | Donald & Karen Sinclair | 1389 / 578 | 0.172 |
| 2901 / 124 | 0.172 | | | |
| 2901 / 123 | 0.172 | | | |
| 100 | 2901 / 122 | Pamela J. Everitt | 1231 / 724 | 0.172 |
| 2901 / 121 | 0.231 | | | |
| 2901 / 120 | 0.132 | | | |
| 2901 / 95 | 0.207 | | | |
| 99 | 2901 / 93 | Trustees of Good Hope Prayer Chapel | 1149 / 860 | 0.206 |
| 2901 / 92 | 0.188 | | | |
| 2901 / 91 | 0.187 | | | |
| 2901 / 90 | 0.249 | | | |
| 98 | 2901 / 89.1 | Oscar Lee Rhodes | 1231 / 1177 | 0.07 |
| 97 | 2901 / 89 | Robert & Martha Allaman | 1208 / 964 | 0.17 |
| 96 | 2901 / 119 | Ronzel C. & Sandra K. Richards | 1205 / 467 | 0.172 |
| 2901 / 118 | 0.172 | | | |
| 2901 / 88 | 0.15 | | | |
| 95 | 2901 / 87 | Sherron K. McKinney & Frankie Snyder | 1297 / 539 | 0.18 |
| 2901 / 86 | 0.18 | | | |
| 2901 / 85 | 0.12 | | | |
| 94 | 2901 / 117 | Jon S. Skinner, et al | WB185/401 | 0.344 |



FILE NO: 195-36-G-18
DRAWING NO: 1208 N-2H Well Plat
SCALE: 1" = 1500'
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: January 24 20 19
OPERATOR'S WELL NO. 1208 N-2H
API WELL NO
47 - 033 - 05153
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1,149' WATERSHED: Middle West Fork Creek
DISTRICT: Grant / Union
SURFACE OWNER: Linda & William W. Brodwater III
ROYALTY OWNER: Leeman B. Maxwell Heirs, et al LEASE NO: ACREAGE: 247.84
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) 7,050' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 19,910' 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

470980510/2019

33-05952
33-05951
33-05954

HG Energy II Appalachia, LLC

Site Safety Plan

**Nutter 1208 Well Pad
104 Hidden Valley Rd Jane Lew
Harrison County, WV 26378**

November 2018: Version 1

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Environmental Protection

**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

SDW
1/28/2019

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 WV Department of
 Environmental Protection

HG Energy II Appalachia, LLC 1208 N-2H LEASE CHAIN

| TRACT # | LEGACY LEASE NUMBER | TAX MAP | LEASE NUMBER | GRANTOR/LESSOR | GRANTEE/LESSEE | ROYALTY | DEED BOOK | PAGE |
|------------------------------------|------------------------------------|---|--------------|--|--|---|------------|------|
| 6 ✓ | LC014207 | 17-12-0425-0031-0003 17-12-425-0031-0000 | Q101051000 | NATHAN POST ET AL | RESERVE GAS COMPANY | NOT LESS THAN 1/8 | 179 | 412 |
| | | | | RESERVE GAS COMPANY | HOPE NATURAL GAS COMPANY | MERGER/NAME CHANGE | 508 | 573 |
| | | | | HOPE NATURAL GAS COMPANY | CONSOLIDATED GAS SUPPLY CORPORATION | MERGER/NAME CHANGE | 903 | 179 |
| | | | | CONSOLIDATED GAS SUPPLY CORPORATION | CONSOLIDATED GAS TRANSMISSION CORPORATION | ASSIGNMENT | 1136 | 250 |
| | | | | CONSOLIDATED GAS TRANSMISSION CORPORATION | CNG TRANSMISSION CORPORATION | MERGER/NAME CHANGE | 51 | 795 |
| | | | | CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 58 | 362 |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION EXPLORATION & PRODUCTION, INC. | MERGER/NAME CHANGE | 1325 | 874 |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION EXPLORATION & PRODUCTION, INC. | ASSIGNMENT | 1427 | 829 |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC | MEMORANDUM FARMOUT AGREEMENT | 1522 | 33 |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | LIMITED PARTIAL ASSIGNMENT (50%) | 1543 | 1235 |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. | PARTIAL ASSIGNMENT (32%) | 1576 | 125 |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | ASSIGNMENT | 1584 | 942 |
| | | | | NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | 660 |
| | | | | NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | 692 |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION ENERGY TRANSMISSION, INC. | MERGER/NAME CHANGE | WVSOS | |
| | | | | DOMINION ENERGY TRANSMISSION, INC. | HG ENERGY II APPALACHIA, LLC | SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT | 1601 | 581 |
| 1 ✓ | FK020606 | 17-20-0444-0011-0000, 17-20-0444-0011-0001, 17-20-0444-0011-0002, 17-20-0444-0011-0003, 17-20-0444-0012-0000, 17-12-0444-0013-0000, 17-12-0444-0014-0000, 17-12-0444-0021-0000, 17-12-0444-0022-0000, 17-12-0445-0001-0000, 17-12-0445-0002-0000, 17-12-0445-0009-0000, 17-12-0445-0010-0000, 17-12-0445-0011-0000 | Q100370000 | J.B. GUSMAN AND ADALINE GUSMAN | TREAT AND CRAWFORD | NOT LESS THAN 1/8 | 158 | 8 |
| | | | | TREAT AND CRAWFORD | UNITED FUEL GAS COMPANY | ASSIGNMENT | 226 | 359 |
| | | | | UNITED FUEL GAS COMPANY | FAYETTE COUNTY GAS COMPANY | ASSIGNMENT | UNRECORDED | |
| | | | | FAYETTE COUNTY GAS COMPANY | HOPE NATURAL GAS | ASSIGNMENT | 201 | 3 |
| | | | | HOPE NATURAL GAS COMPANY | CONSOLIDATED GAS SUPPLY COMPANY | MERGER/NAME CHANGE | 903 | 179 |
| | | | | CONSOLIDATED GAS SUPPLY CORPORATION | CONSOLIDATED GAS TRANSMISSION CORPORATION | ASSIGNMENT | 1136 | 250 |
| | | | | CONSOLIDATED GAS TRANSMISSION CORPORATION | CNG TRANSMISSION CORPORATION | MERGER/NAME CHANGE | 51 | 795 |
| | | | | CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 58 | 362 |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION EXPLORATION & PRODUCTION, INC. | ASSIGNMENT | 1409 | 680 |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION EXPLORATION & PRODUCTION, INC. | ASSIGNMENT | 1442 | 356 |
| | | | | DOMINION EXPLORATION & PRODUCTION, INC. | DOMINION TRANSMISSION, INC. | ASSIGNMENT | 1457 | 978 |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC | MEMORANDUM FARMOUT AGREEMENT | 1522 | 33 |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | LIMITED PARTIAL ASSIGNMENT (50%) | 1543 | 1235 |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. | PARTIAL ASSIGNMENT (32%) | 1576 | 125 |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | ASSIGNMENT | 1584 | 942 |
| | | | | NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | 692 |
| DOMINION TRANSMISSION, INC. | DOMINION ENERGY TRANSMISSION, INC. | MERGER/NAME CHANGE | WVSOS | | | | | |
| DOMINION ENERGY TRANSMISSION, INC. | HG ENERGY II APPALACHIA, LLC | SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT | 1601 | 581 | | | | |
| | | 17-12-0424-0052-0000 17-12-0424-0052-0001 17-12-0424-0052-0002 17-12-0424-0052-0003 17-12-0424-0052-0004 17-12-0425-0031-0000 | | L. BASSELL MAXWELL AND BLONDA MAXWELL, HIS WIFE; AND, JANE M. HENDERSON, WIDOW | HOPE NATURAL GAS COMPANY | NOT LESS THAN 1/8 | 745 | 5 |
| | | | | HOPE NATURAL GAS COMPANY | CONSOLIDATED GAS SUPPLY CORPORATION | MERGER/NAME CHANGE | 903 | 179 |
| | | | | CONSOLIDATED GAS SUPPLY CORPORATION | CONSOLIDATED GAS TRANSMISSION CORPORATION | ASSIGNMENT | 1136 | 250 |
| | | | | CONSOLIDATED GAS TRANSMISSION CORPORATION | CNG TRANSMISSION CORPORATION | MERGER/NAME CHANGE | 51 | 795 |
| | | | | CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 58 | 362 |
| | | | | DOMINION TRANSMISSION, INC. | | | | |

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|---|----------|--|------------|--|--|----------------------------------|------|------|
| 2 | FK065462 | p/o 17-12-0425-0031-0000 17-12-0425-0032-0000 p/o 17-12-0425-0033-0000 17-12-0425-0033-0001 17-12-0425-0033-0002 17-12-0425-0033-0003 p/o 17-12-0425-0033-0004 17-12-0425-0033-0005 | Q101063000 | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY, LLC | MEMORANDUM FARMOUT AGREEMENT | 1522 | 33 |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | LIMITED PARTIAL ASSIGNMENT (50%) | 1543 | 1245 |
| | | 17-12-0405-0075-0000 17-12-2001-0017-0001 17-12-2001-0017-0002 17-12-2001-0018-0001 17-12-2001-0018-0003 17-12-2001-0018-0000 17-12-2001-0018-0002 17-12-2001-0018-0004 17-12-2001-0019-0000 17-12-2001-0020-0000 17-12-2001-0021-0000 17-12-2001-0022-0001 17-12-2001-0023-0000 17-12-2001-0023-0001 17-12-2001-0024-0000 17-12-2001-0033-0000 17-12-2001-0034-0000 17-12-2001-0035-0000 17-12-2001-0036-0000 17-12-2001-0037-0000 17-12-2001-0038-0000 17-12-2001-0039-0000 17-12-2001-0040-0000 17-12-2001-0041-0000 17-12-2001-0024-0001 17-12-2001-0047-0000 17-12-2001-0001-0000 17-12-2001-0002-0000 17-12-2001-0003-0000 17-12-2001-0025-0000 17-12-2001-0026-0000 17-12-2001-0027-0000 17-12-2001-0061-0000 17-12-2001-0062-0000 17-12-2001-0063-0000 17-12-2001-0064-0000 17-12-2001-0065-0000 17-12-2001-0066-0000 17-12-2001-0067-0000 17-12-2001-0055-0000 17-12-2001-0056-0000 17-12-2001-0028-0000 17-12-2001-0028-0001 17-12-2001-0028-0002 17-12-2001-0028-0003 | | | | | | |
| | | | | WM. BURNSIDE AND RUHARY BURNSIDE, HIS WIFE, AKA RLUHAMA BURNSIDE | E.J. WEST (212 ACRES) | NOT LESS THAN 1/8 | 118 | 353 |
| | | | | E.J. WEST | CONSOLIDATED OIL COMPANY | ASSIGNMENT | 118 | 358 |
| | | | | CONSOLIDATED OIL COMPANY | E.C. BEARDSLEY | ASSIGNMENT | 207 | 465 |
| | | | | E.C. BEARDSLEY | THE WHEELING NATURAL GAS COMPANY | ASSIGNMENT | 207 | 419 |
| | | | | THE WHEELING NATURAL GAS COMPANY, TRI STATE GAS COMPANY AND THE MANUFACTURERS LIGHT AND HEAT COMPANY | HOPE NATURAL GAS COMPANY | ASSIGNMENT | 202 | 375 |
| | | | | HOPE NATURAL GASA COMPANY | CONSOLIDATED GAS SUPPLY CORPORATION (212 & 200 AC) | MERGER/NAME CHANGE | 903 | 179 |

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17-12-2001-0044-0000
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17-12-0424-0024-0000
17-12-0424-0025-0000

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Q101084000

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

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 2019
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 Environmental Protection

| | | | | | | | | | | | | |
|--|--|---|------------|--|--|---|------------|-----------------------------|----------------------------------|----------------------|-----|-----|
| 12 ✓ | LC045309 | 17-12-424-0013 | Q100872000 | CONSOLIDATED GAS SUPPLY CORPORATION | CONSOLIDATED GAS TRANSMISSION CORPORATION | ASSIGNMENT | 1136 | 250 | | | | |
| | | | | CONSOLIDATED GAS TRANSMISSION CORPORATION | CNG TRANSMISSION CORPORATION | MERGER/NAME CHANGE | 51 | 795 | | | | |
| | | | | CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 58 | 362 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION EXPLORATION & PRODUCTION, INC. | MERGER/NAME CHANGE | 1325 | 874 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION EXPLORATION & PRODUCTION, INC. | ASSIGNMENT | 1427 | 829 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC | MEMORANDUM FARMOUT AGREEMENT | 1522 | 33 | | | | |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | LIMITED PARTIAL ASSIGNMENT (50%) | 1543 | 1235 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. | PARTIAL ASSIGNMENT (32%) | 1576 | 125 | | | | |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | ASSIGNMENT | 1584 | 942 | | | | |
| | | | | NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | 660 | | | | |
| | | | | NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | 692 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION ENERGY TRANSMISSION, INC. | MERGER/NAME CHANGE | WVSOS | | | | | |
| | | | | DOMINION ENERGY TRANSMISSION, INC. | HG ENERGY II APPALACHIA, LLC | SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT | 1601 | 581 | | | | |
| | | | | 11 ✓ | FK045313 | 17-12-0424-0011-0000 17-12-0424-0011-0001 | Q100261000 | DAVID SCOTT ET AL | JOHN ROY | NOT LESS THAN 1/8 | 118 | 340 |
| | | | | | | | | JOHN ROY AND MARY S. ROY | FEDERAL OIL COMPANY | ASSIGNMENT (7/8INT.) | 118 | 338 |
| JOHN ROY AND MARY S. ROY | FEDERAL OIL COMPANY | ASSIGNMENT (1/8INT.) | 119 | | | | | 223 | | | | |
| FEDERAL OIL COMPANY | T.N. BARNSDALL | ASSIGNMENT | 133 | | | | | 448 | | | | |
| T.N. BARNSDALL, SOUTHER OIL COMPANY, FRED S. RICH, W.S. MORRIS | RESERVE GAS COMPANY | ASSIGNMENT | 235 | | | | | 432 | | | | |
| RESERVE GAS COMPANY | HOPE NATURAL GAS COMPANY | ASSIGNMENT | 432 | | | | | 229 | | | | |
| RESERVE GAS COMPANY | HOPE NATURAL GAS COMPANY | MERGER/NAME CHANGE | 508 | | | | | 573 | | | | |
| HOPE NATURAL GAS COMPANY | CONSOLIDATED GAS SUPPLY CORPORATION | MERGER/NAME CHANGE | 903 | | | | | 179 | | | | |
| CONSOLIDATED GAS SUPPLY CORPORATION | CONSOLIDATED GAS TRANSMISSION CORPORATION | ASSIGNMENT | 1136 | | | | | 250 | | | | |
| CONSOLIDATED GAS TRANSMISSION CORPORATION | CNG TRANSMISSION CORPORATION | MERGER/NAME CHANGE | 51 | | | | | 795 | | | | |
| CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 58 | | | | | 362 | | | | |
| DOMINION TRANSMISSION, INC. | DOMINION EXPLORATION & PRODUCTION, INC. | MERGER/NAME CHANGE | 1325 | | | | | 874 | | | | |
| DOMINION TRANSMISSION, INC. | DOMINION EXPLORATION & PRODUCTION, INC. | ASSIGNMENT | 1427 | | | | | 829 | | | | |
| DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC | MEMORANDUM FARMOUT AGREEMENT | 1522 | | | | | 33 | | | | |
| CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | LIMITED PARTIAL ASSIGNMENT (50%) | 1543 | | | | | 1235 | | | | |
| DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. | PARTIAL ASSIGNMENT (32%) | 1576 | | | | | 125 | | | | |
| CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | ASSIGNMENT | 1584 | | | | | 942 | | | | |
| NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | | | | | 660 | | | | |
| NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | | | | | 692 | | | | |
| DOMINION TRANSMISSION, INC. | DOMINION ENERGY TRANSMISSION, INC. | MERGER/NAME CHANGE | WVSOS | | | | | | | | | |
| DOMINION ENERGY TRANSMISSION, INC. | HG ENERGY II APPALACHIA, LLC | SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT | 1601 | | | | | 581 | | | | |
| 13 ✓ | LC021484 | 17-12-424-0005-0000 | Q101085000 | | | | | WILLIAM AND RUHAMA BURNSIDE | E. J. WEST | NOT LESS THAN 1/8 | 118 | 360 |
| | | | | | | | | E. J. WEST | CONSOLIDATED OIL COMPANY | ASSIGNMENT | 118 | 358 |
| | | | | | | | | CONSOLIDATED OIL COMPANY | E.C. BEARDSLEY | ASSIGNMENT | 207 | 465 |
| | | | | | | | | E.C. BEARDSLEY | THE WHEELING NATURAL GAS COMPANY | ASSIGNMENT | 207 | 419 |
| | | | | THE WHEELING NATURAL GAS COMPANY, TRI STATE GAS COMPANY AND THE MANUFACTURERS LIGHT AND HEAT COMPANY | HOPE NATURAL GAS COMPANY | ASSIGNMENT | 202 | 375 | | | | |
| | | | | HOPE NATURAL GASA COMPANY | CONSOLIDATED GAS SUPPLY CORPORATION (212 & 200 AC) | MERGER/NAME CHANGE | 903 | 179 | | | | |
| | | | | CONSOLIDATED GAS SUPPLY CORPORATION | CONSOLIDATED GAS TRANSMISSION CORPORATOIN | ASSIGNMENT | 1136 | 250 | | | | |
| | | | | CONSOLIDATED GAS TRANSMISSION CORPORATION | CNG TRANSMISSION CORPORATION | MERGER/NAME CHANGE | 51 | 795 | | | | |
| | | | | CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 58 | 362 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC | MEMORANDUM FARMOUT AGREEMENT | 1522 | 33 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC | FIRST AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT | 1524 | 491 | | | | |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | LIMITED PARTIAL ASSIGNMENT (50%) | 1543 | 1235 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. | PARTIAL ASSIGNMENT (32%) | 1576 | 125 | | | | |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | ASSIGNMENT | 1584 | 942 | | | | |
| | | | | NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | 660 | | | | |

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 FEB 22 2019
 WV Department of
 Environmental Protection

| | | | | | | | | | | | | |
|---|---|--|------------|---|--|---|------------|---|---|--------------------|------|-----|
| | | | | NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | 692 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION ENERGY TRANSMISSION, INC. | MERGER/NAME CHANGE | WVSOS | | | | | |
| | | | | DOMINION ENERGY TRANSMISSION, INC. | HG ENERGY II APPALACHIA, LLC | SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT | 1601 | 581 | | | | |
| 22 | FK052902 | 17-20-0404-0032-0000 17-20-0404-0032-0001 17-20-0404-0032-0002 17-20-0404-0032-0003 17-20-0404-0032-0004 17-20-0404-0032-0005 17-20-0404-0032-0006 17-20-0404-0032-0007 17-20-0404-0032-0009 17-20-0404-0032-0010 17-20-0404-0033-0000 17-20-0404-0033-0001 17-20-0404-0033-0002 17-20-0404-0033-0003 17-20-0404-0033-0004 17-20-0404-0033-0005 17-20-0404-0033-0006 | Q100475000 | J.P. POST AND F.C. POST, HIS WIFE | RESERVE GAS COMPANY | NOT LESS THAN 1/8 | 174 | 214 | | | | |
| | | | | RESERVE GAS COMPANY | HOPE NATURAL GAS COMPANY | MERGER/NAME CHANGE | 508 | 573 | | | | |
| | | | | HOPE NATURAL GAS COMPANY | CONSOLIDATED GAS SUPPLY CORPORATION | MERGER/NAME CHANGE | 903 | 179 | | | | |
| | | | | CONSOLIDATED GAS SUPPLY CORPORATION | CONSOLIDATED GAS TRANSMISSION CORPORATION | ASSIGNMENT | 1136 | 250 | | | | |
| | | | | CONSOLIDATED GAS TRANSMISSION CORPORATION | CNG TRANSMISSION CORPORATION | MERGER/NAME CHANGE | 51 | 795 | | | | |
| | | | | CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 58 | 362 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION EXPLORATION & PRODUCTION, INC. | MERGER/NAME CHANGE | 1325 | 874 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION EXPLORATION & PRODUCTION, INC. | ASSIGNMENT | 1427 | 829 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC | MEMORANDUM FARMOUT AGREEMENT | 1522 | 33 | | | | |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | LIMITED PARTIAL ASSIGNMENT (50%) | 1543 | 1235 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. | PARTIAL ASSIGNMENT (32%) | 1576 | 125 | | | | |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | ASSIGNMENT | 1584 | 942 | | | | |
| | | | | NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | 660 | | | | |
| | | | | NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | 692 | | | | |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION ENERGY TRANSMISSION, INC. | MERGER/NAME CHANGE | WVSOS | | | | | |
| | | | | DOMINION ENERGY TRANSMISSION, INC. | HG ENERGY II APPALACHIA, LLC | SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT | 1601 | 581 | | | | |
| | | | | 18 | LC052900 | 17-20-0404-0055-0000 17-20-0404-0055-0001 | Q101130000 | GEO W WASHBURN ET AL | RESERVE GAS COMPANY | NOT LESS THAN 1/8 | 179 | 404 |
| RESERVE GAS COMPANY | HOPE NATURAL GAS COMPANY | MERGER/NAME CHANGE | 508 | | | | | 573 | | | | |
| HOPE NATURAL GAS COMPANY | CONSOLIDATED GAS SUPPLY CORPORATION | MERGER/NAME CHANGE | 903 | | | | | 179 | | | | |
| CONSOLIDATED GAS SUPPLY CORPORATION | CONSOLIDATED GAS TRANSMISSION CORPORATION | ASSIGNMENT | 1136 | | | | | 250 | | | | |
| CONSOLIDATED GAS TRANSMISSION CORPORATION | CNG TRANSMISSION CORPORATION | MERGER/NAME CHANGE | 51 | | | | | 795 | | | | |
| CNG TRANSMISSION CORPORATION | EMAX OIL COMPANY | WELLBORE ASSIGNMENT | 1261 | | | | | 1021 | | | | |
| EMAX OIL COMPANY | CABOT OI AND GAS CORPORATION | COUNTERPART ASSIGNMENT | 1244 | | | | | 755 | | | | |
| CABOT OIL AND GS CORPORATION | ENERVEST APPALACHIA L.P. | CONVEYANCE | 1314 | | | | | 1012 | | | | |
| CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 58 | | | | | 362 | | | | |
| 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 | 1621 | | | | | 1295 | | | | |
| LARA BETH RAMSBURG | HG ENERGY II APPALACHIA LLC | NOT LESS THAN 1/8 | 1615 | | | | | 673 | | | | |
| CAROLYN S.J. HOOVER | HG ENERGY II APPALACHIA LLC | NOT LESS THAN 1/8 | 1615 | | | | | 680 | | | | |
| JOE LAW | HG ENERGY II APPALACHIA LLC | MINERAL DEED | 1606 | | | | | 779 | | | | |
| 21 | FK076181 | 17-20-0404-0055-0001, 17-20-2901-0017-000, 17-20-2901-0017-001, 17-20-2901-00017-002, 17-20-2901-0017-003, 17-20-2901-0017-004, 17-20-2901-0017-005, 17-20-2901-0017-006, 17-20-2901-0197-000, 17-20-2901-0198-000, 17-20-2901-0199-000, 17-20-2901-0200-000, 17-20-2901-0201-000, 17-20-2901-0202-000, 17-20-2901-0203-000, 17-20-2901-0204-000, 17-20-2901-0205-000, 17-20-2901-0206-000, 17-20-2901-0211-000, 17-20-2901-0212-000, 17-20-2901-0213-000, 17-20-2901-0214-000, 17-20-2901-0215-000, 17-20-2901-0216-000, 17-20-2901-0217-000, 17-20-2901-0219-000 | Q101069000 | | | | | OLGA E WASHBURN ET AL | CONSOLIDATED GAS SUPPLY CORPORATION | NOT LESS THAN 1/8 | 923 | 476 |
| | | | | | | | | CONSOLIDATED GAS SUPPLY CORPORATION | CONSOLIDATED GAS TRANSMISSION CORPORATION | ASSIGNMENT | 1136 | 250 |
| | | | | | | | | CONSOLIDATED GAS TRANSMISSION CORPORATION | CNG TRANSMISSION CORPORATION | MERGER/NAME CHANGE | 51 | 795 |
| | | | | CNG TRANSMISSION CORPORATION | EMAX OIL COMPANY | WELLBORE ASSIGNMENT | 1261 | 1021 | | | | |
| | | | | EMAX OIL COMPANY | CABOT OI AND GAS CORPORATION | COUNTERPART ASSIGNMENT | 1244 | 755 | | | | |
| | | | | CABOT OIL AND GS CORPORATION | ENERVEST APPALACHIA L.P. | CONVEYANCE | 1314 | 1012 | | | | |
| | | | | CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 58 | 362 | | | | |
| | | | | 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 | 1621 | 1295 | | | | |
| | | | | LARA BETH RAMSBURG | HG ENERGY II APPALACHIA LLC | NOT LESS THAN 1/8 | 1615 | 673 | | | | |

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WV Department of
Natural Protection

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|------|----------|---|------------|---|--|---|-------|------|
| | | | | CAROLYN S.J. HOOVER | HG ENERGY II APPALACHIA LLC | NOT LESS THAN 1/8 | 1615 | 680 |
| | | | | JOE LAW | HG ENERGY II APPALACHIA LLC | MINERAL DEED | 1606 | 779 |
| 21.2 | | 17-20-2901-0007-000 | HGII108 | Jared Jay Ramsburg | HG ENERGY II APPALACHIA LLC | NOT LESS THAN 1/8 | 1619 | 542 |
| 21.3 | | 17-20-2901-0008-000, 17-20-2901-0009-000 | HGII109 | Jackson Lodge No. 35 A.F. & A.M. | HG ENERGY II APPALACHIA LLC | NOT LESS THAN 1/8 | 1619 | 604 |
| 21.4 | | 17-20-2901-0010-000 | HGII110 | Jackson Lodge No. 35 A.F. & A.M. | HG ENERGY II APPALACHIA LLC | NOT LESS THAN 1/8 | 1619 | 612 |
| 19 | FK052855 | 17-20-0404-0037-0000 17-20-0404-0036-0000 17-20-0404-0035-0000 17-20-0404-0034-0000, 17-20-2901-0100-000 ET AL | Q101019000 | LLOYD WASHBURN ET AL | SOUTH PENN OIL COMPANY | NOT LESS THAN 1/8 | 1443 | 0975 |
| | | | | SOUTH PENN OIL COMPANY | RESERVE GAS COMPANY | ASSIGNMENT | 215 | 351 |
| | | | | RESERVE GAS COMPANY | HOPE NATURAL GAS COMPANY | MERGER/NAME CHANGE | WVSOS | |
| | | | | HOPE NATURAL GAS COMPANY | CONSOLIDATED GAS SUPPLY CORPORATION | MERGER/NAME CHANGE | 903 | 179 |
| | | | | CONSOLIDATED GAS SUPPLY CORPORATION | CONSOLIDATED GAS TRANSMISSION CORPORATION | ASSIGNMENT | 1136 | 250 |
| | | | | CONSOLIDATED GAS TRANSMISSION CORPORATION | CNG TRANSMISSION CORPORATION | MERGER/NAME CHANGE | 51 | 795 |
| | | | | CNG TRANSMISSION CORPORATION | DOMINION TRANSMISSION, INC. | MERGER/NAME CHANGE | 58 | 362 |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY, LLC | MEMORANDUM FARMOUT AGREEMENT | 1522 | 33 |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | LIMITED PARTIAL ASSIGNMENT (50%) | 1543 | 1245 |
| | | | | DOMINION TRANSMISSION, INC. | CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. | PARTIAL ASSIGNMENT (32%) | 1576 | 125 |
| | | | | CNX GAS COMPANY LLC | NOBLE ENERGY, INC. | ASSIGNMENT | 1584 | 942 |
| | | | | NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | 660 |
| | | | | NOBLE ENERGY, INC. | HG ENERGY II APPALACHIA, LLC | ASSIGNMENT | 1600 | 692 |
| | | | | DOMINION TRANSMISSION, INC. | DOMINION ENERGY TRANSMISSION, INC. | MERGER/NAME CHANGE | WVSOS | |
| | | | | DOMINION ENERGY TRANSMISSION, INC. | HG ENERGY II APPALACHIA, LLC | SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT | 1601 | 581 |



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

4703305953
05/10/2019

February 11, 2019

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

RE: Drilling Under Roads – Nutter 1208 N-2H
Union District, Harrison County
West Virginia

Dear Ms. Adkins:

HG Energy II Appalachia, LLC, has the right to drill, stimulate and produce wells that are drilled under the County and State Roads as designated on the plats.

Should you have any questions or desire further information, please contact me at dwhite@hgenergyllc.com or 304-420-1119.

Very truly yours,

Diane White

Diane C. White

Enclosures

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WV Department of
Environmental Protection

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

Date of Notice Certification: 02/15/2019

API No. 47- _____ - _____

Operator's Well No. Nutter 1208 N-2H

Well Pad Name: Nutter Well Pad

Notice has been given:

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

State: West Virginia
 County: Harrison
 District: Grant
 Quadrangle: West Milford
 Watershed: Middle West Fork Creek

UTM NAD 83 Easting: 549740.1
 Northing: 4333950.9
 Public Road Access: SR 19
 Generally used farm name: Nutter

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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.

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:

*PLEASE CHECK ALL THAT APPLY

- 1. NOTICE OF SEISMIC ACTIVITY or NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED
- 2. NOTICE OF ENTRY FOR PLAT SURVEY or NO PLAT SURVEY WAS CONDUCTED
- 3. NOTICE OF INTENT TO DRILL or NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)
- 4. NOTICE OF PLANNED OPERATION
- 5. PUBLIC NOTICE
- 6. NOTICE OF APPLICATION

OOG OFFICE USE ONLY

- RECEIVED/ NOT REQUIRED
- RECEIVED
- RECEIVED/ NOT REQUIRED
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- RECEIVED
- RECEIVED

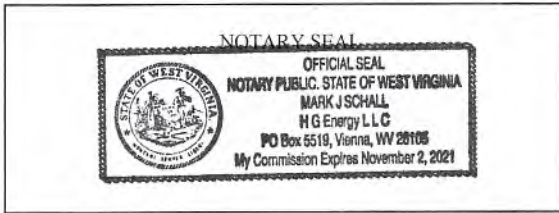
Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

Certification of Notice is hereby given:

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

| | | | |
|----------------|---------------------------------------|------------|-------------------------------|
| Well Operator: | <u>HG 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 15th day of February, 2019.

Mark J Schall Notary Public

My Commission Expires 11/2/2021

Oil and Gas Privacy Notice:

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

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WV Department of
Environmental Protection

WW-6A
(9-13)

4703905953
API NO. 47- - 05/10/2019
OPERATOR WELL NO. Nutter 1208 N-2H
Well Pad Name: Nutter 1208

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: 02/15/19 Date Permit Application Filed: 02/21/19

Notice of:

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

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

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

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

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

SURFACE OWNER(s) ✓
Name: Lisa M. Nutter (Surface and Surface Road)
Address: 382 Hidden Valley Road
Jane Lew, WV 26378

Name: William W. & Linda Broadwater (Surface & Water Well) ✓
Address: 132 Praise Lane
Jane Lew, WV 26378

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

Name: _____
Address: _____

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

COAL OWNER OR LESSEE
Name: _____
Address: _____

COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s) ✓
Name: William & Connie Thomaschek
Address: 40 Praise Lane
Jane Lew, WV 26378

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

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WV Department of
Environmental Protection

*Please attach additional forms if necessary

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

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2019

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

WV Department of
Environmental Protection

WW-6A
(8-13)

API NO. 47-3330-05953
OPERATOR WELL NO. Nutter 1208 OH
Well Pad Name: Nutter 1208
05/10/2019

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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WW-6A
(8-13)

API NO. 47 **33** - **05053** **05/10/2019**
OPERATOR WELL NO. Nutter 1208 N-2H
Well Pad Name: Nutter 1208

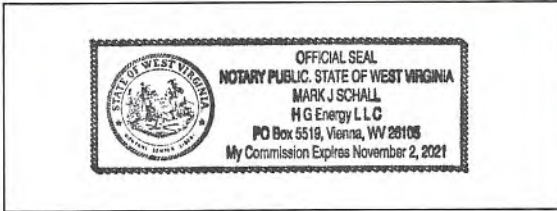
Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this 15th day of February, 2019.

[Signature] Notary Public

My Commission Expires 11/2/2021

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05/10/2019

Diane White

From: Diane White
Sent: Monday, November 26, 2018 5:02 PM
To: Vickie Hoops (vhoops@sturmenvironmental.com)
Subject: Pre Drill Water Testing for the Nutter 1208 Well Pad

Vicki,
Good afternoon. We need to have two possible water sources tested if the surface owners will allow it.

Nutter 1208 Well Pad, Harrison County, Grant District, West Milford WV 7.5' Quadrangle, Middle West Fork Creek Watershed, LAT/LONG (DD NAD 83) – 39.153300, -80.424351

- 1 - William & Connie Thomaschek, 40 Praise Lane, Jane Lew, WV 26378
- 2 - William & Linda Broadwater, 132 Praise Lane, Jane Lew, WV 26378 304-884-6406

Please ask the Technician to identify the testing sheets with Nutter 1208 Well Pad please.
Thank You,
Diane

Diane C. White



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

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WV Department of
Environmental Protection

Sturm Environmental Services

JOHN W. STURM, PRESIDENT

COMPANY: H.G. ENERGY, LLC.

DATE/TIME SAMPLED: 11-29-18 1115

SAMPLE ID: WILLIAM THOMASCHECK
NUTTER 1208 PAD

DATE/TIME RECEIVED: 11-29-18 1232

SAMPLED BY: K. WILLIAMS

LABORATORY ID: HG 181129-1

| PARAMETER | TEST RESULTS | UNITS | METHOD | METHOD DETECTION LIMIT | DATE/TIME ANALYZED | ANALYST |
|-----------------|--------------|-------|------------------------------|------------------------------|-----------------------|---------|
| FIELD pH | 7.3 | units | | | 11-29-18 1115 | KW |
| FIELD TEMP | 21.5 | °C | | | 11-29-18 1115 | KW |
| FIELD COND | 480 | µmhos | | | 11-29-18 1115 | KW |
| LATTITUDE | 39°09'23.81" | N | | | 11-29-18 1115 | KW |
| LONGITUDE | 80°25'38.03" | W | | | 11-29-18 1115 | KW |
| pH | O 7.3 | units | SM 22 nd 4500 H B | .1 | 11-30-18 0912 | KH |
| Fe | U | mg/L | EPA 200.7 Rev 4.4-1994 | .02 | 12-01-18 0657 | DB |
| TDS | 247 | mg/L | USGS 1-1750-85 | 4 | 12-03-18 1400 | MRS |
| Cl ⁻ | 10.3 | mg/L | EPA 300.0 Rev 2.1-1993 | .50 | 12-05-18 0552 | DC |
| MBAS | U | mg/L | SM22 nd 5540C | .01 | 11-30-18 2136 | SW |
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*Client Provided

**See Attached. The following results meet or exceed requirements and standards set forth by the certifying authority except where noted.

Data Qualifiers

- B Analyte found in reagent blank. Indicates possible reagent or background contamination.
- E Estimated Reported value exceeded calibration range.
- J Reported value is an estimate because concentration is less than reporting limit.
- PND Precision not determined.
- R Sample results rejected because of gross deficiencies in QC or method performance. Re-sampling and/or re-analysis is necessary.
- RND Recovery not determined.
- U Compound was analyzed for, but not detected.
- O Out of holding. Time does not meet 40 CFR 136/141 compliance.
- T This result is not supported by our certification ID.
- A Does not meet 40 CFR 136/141 compliance.
- C Does not meet 47 CSR 32 compliance.

Narrative:

Approved Douglas H. Bando

MAIN OFFICE AND LABORATORY—POST OFFICE BOX 650 • BRIDGEPORT, WEST VIRGINIA 26330 • (304) 623-6549
CHARLESTON FIELD OFFICE—POST OFFICE BOX 8337 • SOUTH CHARLESTON, WEST VIRGINIA 25303-0337 • (304) 744-9864

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Environmental Protection

Sturm Environmental Services

33 05953

JOHN W. STURM, PRESIDENT

COMPANY: H.G. ENERGY, LLC.

DATE/TIME SAMPLED: 11-29-18 1125

SAMPLE ID: WILLIAM BROADWATERS
NUTTER 1208 PAD

DATE/TIME RECEIVED: 11-29-18 1232

SAMPLED BY: K. WILLIAMS

LABORATORY ID: HG 181129-2

| PARAMETER | TEST RESULTS | UNITS | METHOD | METHOD DETECTION LIMIT | DATE/TIME ANALYZED | ANALYST |
|-----------------|--------------|-------|------------------------------|------------------------------|-----------------------|---------|
| FIELD pH | 7.8 | units | | | 11-29-18 1125 | KW |
| FIELD TEMP | 24.8 | °C | | | 11-29-18 1125 | KW |
| FIELD COND | 420 | µmhos | | | 11-29-18 1125 | KW |
| LATTITUDE | 39°09'24.84" | N | | | 11-29-18 1125 | KW |
| LONGITUDE | 80°25'31.97" | W | | | 11-29-18 1125 | KW |
| pH O | 7.6 | units | SM 22 nd 4500 H B | .1 | 11-30-18 0912 | KH |
| Fe | .13 J | mg/L | EPA 200.7 Rev 4.4-1994 | .02 | 12-01-18 0657 | DB |
| TDS | 218 | mg/L | USGS I-1750-85 | 4 | 12-03-18 1400 | MRS |
| Cl ⁻ | 3.60 | mg/L | EPA 300.0 Rev 2.1-1993 | .50 | 12-05-18 0552 | DC |
| MBAS | .02 | mg/L | SM22 nd 5540C | .01 | 11-30-18 2136 | SW |
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*Client Provided

**See Attached. The following results meet or exceed requirements and standards set forth by the certifying authority except where noted.

Data Qualifiers

- B Analyte found in reagent blank. Indicates possible reagent or background contamination.
- E Estimated Reported value exceeded calibration range.
- J Reported value is an estimate because concentration is less than reporting limit.
- PND Precision not determined.
- R Sample results rejected because of gross deficiencies in QC or method performance. Re-sampling and/or re-analysis is necessary.
- RND Recovery not determined.
- U Compound was analyzed for, but not detected.
- O Out of holding. Time does not meet 40 CFR 136/141 compliance.
- T This result is not supported by our certification ID.
- A Does not meet 40 CFR 136/141 compliance.
- C Does not meet 47 CSR 32 compliance.

Narrative:

Approved



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STURM ENVIRONMENTAL SERVICES

CHAIN OF CUSTODY RECORD

Main Office:
STURM ENVIRONMENTAL SERVICES
BRUSHY FORK ROAD
P.O. BOX 850
BRIDGEPORT, WV 26330
PHONE: 304-623-6949
FAX: 304-623-6952

STURM ENVIRONMENTAL SERVICES
610 D STREET
P.O. BOX 6387
SC, CHARLESTON, WV 25303
PHONE: 304-744-8984
FAX: 304-744-7898

REPORT TO: Client Name: HQ ENERGY
Address: _____
City/State/Zip: _____
Contact Person: _____
Telephone Number: _____
Fax No.: _____
Email Address: _____

BILL TO: Client Name: _____
Address: _____
City/State/Zip: _____
Contact Person: _____
Telephone Number: _____
Fax No.: _____
Email Address: _____

Sample Name (PID): Keene Well
Project Name: Well 2
Special Reporting: Water
Email Rec'd: _____
Fax Rec'd: _____

Purchase Order #: _____
TURN AROUND TIME: 1 DAY
Standard _____
QUICK (see check) surcharges may apply Please Check One
Data Rec'd: _____
1 DAY 2 DAY 3 DAY

| Sample ID / Description | START DATE | START TIME | END DATE | END TIME | DATE | TIME | IN | OTHER | PHENOL | HAZAR | ANALYST | | | | | | | |
|-------------------------|------------|------------|----------|----------|------|------|----|-------|--------|-------|---------|--|--|--|--|--|--|--|
| <u>Well 2</u> | | | | | | | | | | | | | | | | | | |
| <u>Well 2</u> | | | | | | | | | | | | | | | | | | |
| <u>Well 2</u> | | | | | | | | | | | | | | | | | | |
| <u>Well 2</u> | | | | | | | | | | | | | | | | | | |

Remarks:
Analyzed by: [Signature] Date: 11-29-88
Collected by: [Signature] Date: 11-29-88
Reanalyzed by: [Signature] Date: 11-29-88
Reanalyzed for: 5 years

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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: 02/05/2019 **Date of Planned Entry:** 02/13/2019

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

Name: Lisa Nutter
Address: 382 Hidden Valley Road
Jane Lew, WV 26378

Name: William W. & Linda Broadwater
Address: 132 Praise Lane
Jane Lew, WV 26376

Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: NA
Address: _____

MINERAL OWNER(s)

Name: **See Attached List**
Address: _____

*please attach additional forms if necessary

Notice is hereby given:

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

State: West Virginia
County: Harrison
District: Grant
Quadrangle: West Millford, WV 7.5'

Approx. Latitude & Longitude: 39.153340 / -80.424337
Public Road Access: SR 19
Watershed: Middle West Fork Creek
Generally used farm name: Nutter

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

Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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

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(1-12)

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Mineral Owners

Adam Lee Carder /
58 Washburn St
Lost Creek, WV 26385

Amber Campbell /
245 Washburn Street
Lost Creek, WV 26385

Amy M. Blankenship /
1908 Huber Rd
Charleston, WV 25314

Anna L. Lukasko Trust /
783 Peregrine Pl
Amherst, OH 44001

Argent Company,
Agent for Charles L Maxwell /
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company,
Agent for Deborah Bell Meyer /
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company,
Agent for JR Gray Koubek and TD Koubek /
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company,
Agent for Mary Virginia Gray Trust /
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Alfred Lee Cork /
486 1/2 Lee Ave.
Clarksburg, WV 26301

Amy Geraldine Brown /
258B Brown Rd
Jane Lew, WV 26378

Ann Covington /
1401 Torrey Pines Dr
Columbia, MO 65203-4825

Annette C. Nichols /
RR 1 Box 124
Lost Creek, WV 26385-9721

Argent Company,
Agent for David Maxwell Gray /
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company,
Agent for Donna Frumento /
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company,
Agent for Joseph L Maxwell /
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company,
Agent for Pamela Jane Bell Revocable Trust /
621 N. Robinson Suite 100
Oklahoma City, OK 73102

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Argent Company,
Agent for Piala Living Trust
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company,
Agent for Robert Nimorwicz
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company,
Agent for Steven L Maxwell
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argent Company,
Agent for Susan Brown Yunker
621 N. Robinson Suite 100
Oklahoma City, OK 73102

Argyle Shingleton
202 Emerson Rd
Clarksburg, WV 26301

Barbara June Richard
1320 San Rafael Drive
Petaluma, CA 94952

Barbara K Marchio
28325 Elmdale St
Saint Clair Shores, MI 48081-1485

Bernard J. Burns III
1300 S. Barton St #341
Arlington, VA 22204

Betty Jean Tonkery Inscore
3300 Castlegate Drive
Raleigh, NC 27616

Billie June Stempert
100 Michelli Dr, RM 114
Barnesville, OH 43713

Black Bear Energy Corporation
8544 West Virginia Highway 5
East Sand Fork, WV 26430

Bradford Cottrill & Nicholas Cottrill
116 Washington Drive
Lost Creek, WV 26385

Brian L. Rhoades
165 Fowler Rd
Jane Lew, WV 26385

Buckner W. Hornor
486 Irish Hill Rd
Hopkinton, NH 03229-2202

Carl J. Edwards
25 E. Park Mobile Village
Fairmont, WV 26554

Carleton David Lloyd
1505 WEATHERFORD DR
Sun City Center, FL 33573

Carleton David Lloyd
1505 WEATHERFORD DR
Sun City Center, FL 3357

Carolyn R Burnside
560 Ridgeview Dr, Apt 201
Bridgeport, WV 26330

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Mineral Owners

Carolyn S. J. Hoover
702 North 3rd St.
Sutton, WV 26601

Carolyn Wood Kaeser
13 Princeton Place
Hagerstown, MD 21742

Charles E. Steffich
RR 1 Box 132
Lost Creek, WV 26385

Charles Henry Burnside
867 MIDDLETOWN RD
Shinnston, WV 26431

Charles Henry Burnside
(CHARLES HENRY GRANDSON)
867 MIDDLETOWN RD
Shinnston, WV 26431

Charles K. Goldsmith
4267 Mount Clare Road
Mount Clare, WV 26408-7100

Chester Lee Burnside
136 Redstone Church Road
Fayette City, PA 15438

Christine Rae Hall
117 SOUTH ST
Bluffton, SC 29910

Chun H. Underwood
RR 1 Box 130B
Lost Creek, WV 26385

Darren Gail Burnside
217 Clay Street
Hambleton, WV 26269

Darren Gail Burnside
217 Clay Street
Hambleton, WV 26269

David Louis Favot
112 Creek Way
Santa Rosa, CA 95403

Dawn Marie Posey
2184 Jennings Run Rd
Weston, WV 26452

Deborah Nay Stutler
9967 WV Route 18S
New Milton, WV 26411

Dennis J. Burnside, Jr.
265 Fenton Pl
Clarksburg, WV 26301

Diane Burnside West
by her POA, William Holmes West
40 Fenton Place
Clarksburg, WV 26301

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Mineral Owners

Dixie L. Quickle
RR 1 Box 138C
Lost Creek, WV 26385

Donald L. & Karen Sinclair (Life Estate)
Morgan & Cole Sinclair, Remainderman
408 Michigan Ave
Nutter Fort, WV 26301

Donald L. Johnson
P.O. Box 209
Lakemore, OH 44250

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

Donald R Wilson
212 NE 56th Street
Oak Island, NC 28465-4919

Donna Hefley Tucker
628 Hwy 77 South
Davis, OK 73030

Dorothy E. Limppo
229 Prado Way
Berkeley Springs, WV 25411

Duane Burnside
5870 Heartwood Ct
Harrisburg, NC 28075-7594

Edna Alexander
1806 Artisan Ave
Huntington, WV 25703

Edward H. Burnside
144 D Street
Keyser, WV 26726

Elaine Sue Dixon
1848 Green Ave
Clarksburg, WV 26301

Elizabeth A Beveridge
243 Shady Lane
Alma, WV 26320

Eugene B Ward Jr & Gary Michael Ward
10 New England Court
Fairmont, WV 26554

Eugene H. Armstrong
102 Vista Drive
Bridgeport, WV 26330

Evelyn Ruth Premoshis
855 Fayette City Rd
Fayette City, PA 15438

Floyd J. Burnside
187 Dyke St
Big Sandy, TN 38221

Gary L & Karen S Carroll
RR 1 Box 205
Lost Creek, WV 26385

Gary Lee Butts
507 Forest Glen Dr
Moorefield, WV 26836

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George Ann Keener
2959 Union Square Rd. New Windsor
New Windsor, MD 21776

Gina Burnside
42723 Cool Breeze Square
Leesburg, VA 20176

Gregory Gail Burnside
504 Long Run Rd
Lost Creek, WV 26385

Harold Tepper, Jr
66 Port Washington RD
Sound Beach, NY 11789

Heirs of John W. Toothman,
Successors and/or Assigns
84 Washburn St
Lost Creek, WV 26385

Hiram Gene Burnside
301 Arthur Ave Plz #8
Clarksburg, WV 26301

Hiram Gene Burnside
P.O. Box 8044
Nutter Fort, WV 26302

Hylan Calcerano
1520 N. Franklin Blvd
Pleasantville, NJ 08232

I.L. Morris
P.O. Box 397
Glennville, WV 26351

Iden Scott McWhorter
1661 LaFrance St Ne Unit 314
Atlanta, GA 30307

Jack Lynn Butts
4554 Fairview Drive
Berkeley Springs, WV 25411

Jackson Lodge No. 35 A.F. & A.M.
Route 19 South
Good Hope, WV 26451

James A. Edwards
1115 Virginia Ave
Fairmont, WV 26554

James E & Mary Ann Gabriel
103 Wesley DR
Lost Creek, WV 26385

James R. Burnside
P.O. Box 392
West Milford, WV 26451

James R. Kettering Jr
PO Box 511
Fairmont, WV 26555-0511

James William Jay
2 Stratford Crescent
Richmond, VA 23226

James Y. Hornor and Jean S. Hornor
5002 Esmond Lane
Castle Rock, CO 80108-9027

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Mineral Owners

Jane M Hardin /
225 Watchung FRK
Westfield, NJ 07090

Janet Sue Butts /
507 Forest Glen Dr /
Moorefield, WV 26836

Jared Jay Ramsburg /
755 South Main Street, Suite 4-402
Cedar City, UT 84720

Jean Ann Griffin
2665 Misty Morning Lane
Roswell, GA 30076

Jessica Schrage /
511 Heritage Dr.
Sparta, KY 41086

Joe R. Law
3814 Fairmont Ave
Fairmont, WV 26554-5479

John D. Morris
3443 Gulf Shore Blvd N #407
Naples, FL 34103

John Horner and Dreama Horner
RR 2 Box 210B
Jane Lew, WV 26378

John Timothy Burns /
15 Della Lane /
Boonesboro, MD 21713

Jane Rae May /
2447 Merrigan Place /
Tallahassee, FL 32309

Janice Holmes Bumgardner, Widow /
1913 Poplar Crest Ln
Charlotte, NC 28214

Jason A and Jennifer E Post /
675 Isaac Creek Rd
Lost Creek, W 26385

Jeanne Jones Beck /
129 W 5th St /
Russell, KS 67665-2716

Joan Hall /
Rt. 2 Box 48 Stevens Run Rd.
Lost Creek, WV 26385

John Britton Edwards II /
1809 Garden Drive /
Virginia Beach, Virginia 23454-407

John Henry McWhorter /
5392 Duck Creek Road /
Lost Creek, WV 26385

John Scott Skinner /
24 Washburn St /
Lost Creek, WV 26385

Jon S. & Wendy J. Skinner /
24 Washburn St
Lost Creek, WV 26385

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(1-12)

1208N - 2H

Page 1 Continued

Mineral Owners

K. Rodney McCall & Charlene McCall ✓
83 Westfall Ave
Lost Creek, WV 26385

Kathleen Favot-Blanquie ✓
931 I Street
Petaluma, CA 94952

Kenneth Burnside ✓
203 Locust View Drive
Clarksburg, WV 26301

Kenneth Scott Hall ✓
127 South Street
Bluffton, SC 29910

Kimberly A. Taylor ✓
2 Washburn St
Lost Creek, WV 26385

Lara Beth Ramsburg ✓
330 Frederick Ave
Sewickley, PA 15143

Larry W. Myers and Rebecca E. Myers ✓
9183 Good Hope Pike
Lost Creek, WV 26385

Lewis Wayne Davis ✓
P.O. Box 2078
Buckhannon, WV 26201 ✓

Linda Sue Hall Peterson
11101 Coventry Way, Unit 301
Tustin, CA 92782-2753

Karen M Henderson ✓
190 Sapphire Lane
Meadowbrook, WV 26404

Kathryn Marie Burnside ✓
Rt 1 Box 138 A
Lost Creek, WV 26385

Kenneth Burnside ✓
201 Maple View Dr
Clarksburg, WV 26301

Kevin McNemar ✓
P.O. Box 534
Lumberport, WV 26385

Kylene Claypoole ✓
701 Industrial Drive West
Sulphur Springs, TX 75482

Larry J. Olinger ✓
28561 Revere
Warren, MI 48092

Leona J Skinner Auvil ✓
222 S Maple Ave
Clarksburg, WV 26301

Linda Grimes ✓
1688 Jakes Run Rd.
Lost Creek, WV 26385

Lisa K. Painter ✓
301 Devonshire Ct
Cranberry Twp, PA 16066

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Mineral Owners

Lynwood D. Burnside ✓
22 Southgate Hills Dr
Clarksburg, WV 26301

Mark Stephen Favot ✓
931 I Street
Petaluma, CA 94952

Mary Ann Wood /
7505 Sawgrass Terrace
Montgomery Village, MD 20886

Mary H. Balmer /
619 Ohio Ave
Eustis, FL 32726-5121

Mary L. Tinney (Life Estate)
PL Tinner, GR Tinney, C Haycox (Remainderman)
8971 Good Hope Pike
Lost Creek, WV 26385

Michael C. Burnside /
42723 Cool Breeze Square
Leesburg, VA 20176

Michael Ross /
PO Box 880
Glennville, WV 26351-0880

New Beginnings Church
fka Good Hope Prayer Chapel
by TE Sears II, President
8901 Good Hope Pike
Lost Creek, WV 26385

Mal R. Burnside fka Richard Burnside ✓
2349 Pattison Ave
Cheyenne, WY 82009

Martha L. Somerville /
2335 Lost Creek Romines Mill Rd.
Lost Creek, WV 26385

Mary Elushia Favot ✓
PO BOX 4686
Petaluma, CA 9545

Mary Jane Lewis ✓
146 E Main St
Clarksburg, WV 26301

Maxine J. Gamble and David L.. Gamble
2016 Baldwin Drive ✓
Reynoldsburg, Ohio 43068

Michael K. Burnside
PO BOX 582
Kingwood, WV 26537

Michael Ross and Waco Oil & Gas Co, Inc
PO Box 880
Glennville, WV 26351-0880

New Bethel United Methodist Church
1407 Davisson Run Rd
Clarksburg, WV 26301

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Mineral Owners

Okey F. Gallien, Jr & Leatrice C Gallien
13 Norris Ridge Road
Philippi, WV 26416

Okey G. Allawat
229 Washburn Street
Lost Creek, WV 26385

Oscar Lee Rhoades
14 Perine St
Lost Creek, WV 26385

Page Harmer Thomas
714 Shamrock Ln
Charleston, SC 29412

Pamela J. Everitt
63 Washburn St
Lost Creek, WV 26385

Patricia A. Bartlett Helmick
3006 City View Drive
Parkersburg, WV 26101

Patricia A. and Clifford E. Mealey
5240 Fawn Drive
Akron, OH 44319

Patricia B. Craft
7749 Church St
Middletown, VA 22645

Paul Allen Hornor Jr.
161 Cooing Dove Drive 9
Bridgeport, WV 26330-6749

Perry Lee Post
397 Isaac Creek Road
Lost Creek, WV 26385

Post Heritage LLC
1407 Davisson Run Rd
Clarksburg, WV 26301

Prayer Chapel of Good Hope
RR 5 Box 341
Clarksburg, WV 26301

Rebecca A. Bennett
122 Perine St
Lost Creek, WV 26385

Rhonda J. Arrington
fka Rhonda Burnside
11377 N 1720 Rd
Sweetwater, OK 73666-6311

Richard Evertt & Michelle Marie Casto
675 Isaac Creek Road
Lost Creek, W 26385

Richard L. Thompson
1609 Church Hill Downs Dr
Waxhaw, NC 28273

Robert D. Wilt
9057 Good Hope Pike
Lost Creek, WV 26385

Robert Dean Davis
15617 South 7th St
Phoenix, AZ 85048

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(1-12)**Page 1 Continued****Mineral Owners**

Robert G. Allman and Martha Allman
8937 Good Hope Pike
Lost Creek, WV 26385

Roberta Smiley
1400 Bent Creek Blvd apt 128
Mechanicsburg, PA 17050

Ronald L. Johnson
P.O. Box 209
Lakemore, OH 44250

Roy McNemar
2105 Lost Creek Romines Mill Rd.
Lost Creek, WV 26385

Sabrina Burnside
55 S Main St
Keyser, WV 26726

Seneca-Upshur Petroleum LLC
PO Box 2048
Buckhannon, WV 26201-2048

Steven D Bumgardner
797 Wymer Run Rd
Jane Lew, WV 26378

Thomas H. Wilson
1412 Western Ave
Morgantown, WV 26505-2148

New Bethel United Methodist Church,
Trustees
43 Bran Acres Dr
Lost Creek, WV 26385

Robert J. Hitt and Amanda Jo Hitt
8934 Good Hope Pike
Lost Creek, WV 26385

Roberta Smiley
2 Smiley Drive
Mechanicsburg, PA 17050

Ronzel C Richards & Sandra K Richards
86 Isaacs Creek Rd
Lost Creek, WV 26385

Rubin B Vanscoy
8053 Kidd Ave
Clarksburg, WV 26301-7706

Scott Burnside
2775 Anmoore Rd.
Bridgeport, WV 26330

Shirley L Miller
4267 Mount Clare Road
Mount Clare, WV 26408-7100

Susan M. Young c/o Jean Ann Griffin
2665 Misty Morning Lane
Roswell, GA 30076

Timothy E. and Anissa K. Davis
862 Saddletree Rd
Mt. Clare, WV 26408

Virgil McNemar
2297 Lost Creek Romines Mill Rd.
Lost Creek, WV 26385

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Mineral Owners

Waco Oil & Gas Co, Inc
PO Box 880
Glenville, WV 26351-0880

William A. Burnside
5943 Jarvisville Rd
Salem, WV 26426

William E. Wagner
513 Vantage Dr
Morgantown, WV 26508-2635

William Michael Davis
3109 Maplelawn Ave NW
Roanoke, VA 24012

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WW-6A4
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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: 02/11/2019 **Date Permit Application Filed:** 02/21/2019

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: Lisa M. Nutter
Address: 382 Hidden Valley Road
Jane Lew, WV 26378

Name: William W. & Linda Broadwater
Address: 132 Praise Lane
Jane Lew, WV 26378

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
County: Harrison
District: Grant
Quadrangle: West Milford WV 7.5'
Watershed: Middle West Fork Creek

UTM NAD 83 Easting: 549740.1
Northing: 4333950.9
Public Road Access: SR 19
Generally used farm name: Nutter

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FEB 23 2019

WV Department of
Environmental Protection

This Notice Shall Include:

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

Notice is hereby given by:

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

Authorized Representative: Diane White
Address: 5260 Dupont Road
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.

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: 02/13/2019 Date Permit Application Filed: 02/21/2019

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: Lisa M. Nutter
Address: 382 Hidden Valley Road
Jane Lew, WV 26378

Name: William W. & Linda Broadwater
Address: 132 Praise Lane
Jane Lew, WV 26378

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Notice is hereby given:

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

| | |
|--|---|
| State: <u>West Virginia</u> | UTM NAD 83 Easting: <u>549740.1</u> |
| County: <u>Harrison</u> | Northing: <u>4333950.9</u> |
| District: <u>Grant</u> | Public Road Access: <u>SR 19</u> |
| Quadrangle: <u>West Millford WV 7.5'</u> | Generally used farm name: <u>Nutter</u> |
| Watershed: <u>Middle West Fork Creek</u> | |

This Notice Shall Include:

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

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

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

Oil and Gas Privacy Notice:

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



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
Division of Highways

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

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

Jill M. Newman
 Deputy Commissioner

February 13, 2019 ✓

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 Nutter 1208 Well Pad, Harrison County ✓
 N-2H Well Site ✓

Dear Mr. Martin,

This well site will be accessed from Permit #04-2018-1374 issued to HG Energy II Appalachia for access to the State Road for a well site located off of Harrison County 19/20 SLS.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated October 1, 2018.
 82.

Very Truly Yours,

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

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

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List of Frac Additives by Chemical Name and CAS #**Nutter 1208 Well Pad (N-1H to N-5H, S-6H to S-10H)**

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

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CONSTRUCTION IMPROVEMENT PLANS WITH EROSION AND SEDIMENT CONTROLS

HG 1208 WELL PAD

APPROVED WVDEP OOG
1/28/2019

GRANT DISTRICT
HARRISON COUNTY
WEST VIRGINIA

| Estimated Gross Material Balance (CY) | | | |
|--|--------|--------|-----------|
| Final Development - Gravel Option | | | |
| Item | Est. | Est. | Stockpile |
| 1208 Well Pad A | 58,552 | 15,213 | -6,501 |
| Grading Area | 8,896 | 5,684 | 2,931 |
| Access Road | 65,149 | 70,767 | -6,000 |
| Total | | | |
| Soil Augmentation Aggregate Project: | | | |
| Final | 9,969 | | |
| Total Site Balance | | | 2,625 Cu |
| Storage Topsoil (Limit of Disturbance) | | | 19,260 |
| Est. Swell Factor | 23% | | 3.617 |
| Est. Topsoil Stockpile Volume (I) (see CV) | | | 21,000 |
| Minimum Total Stockpile Capacity Required (I) (CV) | | | 24,337 |

Notes:
1. Material balance for est. post-construction quantities only.
2. Topsoil est. volume based on 4 inches average depth.
3. Material balance and aggregate quantities based on estimates and may not be representative of actual quantities.
4. Estimates do not reflect contractor pay volumes.

| Estimated Gravel Quantities | | | |
|--|-----------|------------|------------|
| Item | Est. (CY) | Est. (CWT) | Est. (TON) |
| Soil Sub. (Based SV) | 39,111 | 14,147 | 64,135 |
| Depth of 3rd Gravel Run (Inch) | 3.50 | 1,523 | 4,195 |
| Top Coat Chip & Soil (Based SV) | - | - | 9,877 |
| Total | | | |
| Estimated Total Gravel - Final Stock Length (LP) | | | 6,760 |
| Estimated Road Final Stock Length (LP) | | | 2,824 |
| Estimated Well Pad and Staging Area Final Stock Length (LP) | | | 2,316 |
| Estimated Total End of Disturbance (Acres) | | | 22,420 |
| Estimated Access Road Limit of Disturbance (Acres) | | | 7,811 |
| Estimated Well Pad and Staging Area Limit of Disturbance (Acres) | | | 15,309 |
| Well Pad and Staging Area Final Pre-Construction Elevation (Ft) | | | 1182.0 |

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CONSTRUCTION SEQUENCE

- Prior to commencement of any earth disturbance activity including clearing and grubbing, the registrant shall call West Virginia 811 or 1-800-245-4848 to identify all utility lines. The registrant also must clearly delineate sensitive areas, riparian forest buffer boundaries, the limits of clearing, and trees that are to be conserved within the project site, and shall install appropriate barriers where equipment may not be parked, staged, operated or located for any purpose.
- Site access - This is the first land-disturbance activity to take place at the site and should provide BMPs to minimize accelerated erosion and sedimentation from the following areas: entrance to the site, construction routes, and areas designated for equipment or other use at the site including parking, stockpiles.
- Sediment Barriers - Install perimeter BMPs after the construction site is accessed, keeping associated clearing and grubbing limited to only that amount required for installing perimeter BMPs.
- Land Clearing and Grading - Implement clearing and grading only after all downslope E&S BMPs have been constructed and stabilized.
- Surface Stabilization - Apply temporary or permanent stabilization measures immediately to any disturbed areas where work has reached final grade, has been delayed or otherwise temporarily suspended.
- Construction of Buildings, Utilities, and Paving - During construction, install and maintain any additional erosion and sediment control BMPs, and implement any structural post construction stormwater BMPs that may be required.
- Upon completion of pad grading, compact the pad to grade and begin placement of pad soil cement.
- Final Stabilization, Topsoiling, Trees and Shrubs - After construction is completed, install stabilization BMPs including: permanent seeding, mulching and riprap, and complete implementation of stormwater BMPs in this last construction phase. Stabilize all open areas, including borrow and spoil areas, and remove all temporary BMPs and stabilize any disturbances associated with the removal of the BMP.



| SHT. NO. | SHEET TITLE |
|----------|------------------------------|
| 1 | TITLE SHEET |
| 2A-2D | SITE DEVELOPMENT PLANS |
| 3A-3B | PAD & STOCKPILE SECTIONS |
| 4A-4C | ACCESS ROAD SECTIONS |
| 5A-5F | CONSTRUCTION NOTES & DETAILS |
| 6A-6D | RESTORATION PLAN |
| 7 | PROPERTY MAP |

| WELL # | LAT. | LONG. |
|--------|-------------|-------------|
| N-1H | N 39.153300 | W 80.424351 |
| N-2H | N 39.153340 | W 80.424337 |
| N-3H | N 39.153379 | W 80.424324 |
| N-5H | N 39.153410 | W 80.424310 |
| N-4H | N 39.152459 | W 80.424296 |
| S-7H | N 39.153074 | W 80.423284 |
| S-6H | N 39.152114 | W 80.423270 |
| S-8H | N 39.152154 | W 80.423256 |
| S-9H | N 39.153193 | W 80.423242 |
| S-10H | N 39.153233 | W 80.423228 |

PREPARED FOR
HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD
PARKERSBURG, WEST VIRGINIA 26101
(304) 420-1100

PREPARED BY
PENN ENVIRONMENTAL & REMEDIATION, INC.
111 RYAN COURT
PITTSBURGH, PA 15205
(412) 722-1222

| 1208 WELL PAD ACCESS ROAD ENTRANCE | LATITUDE | LONGITUDE |
|------------------------------------|-------------|-------------|
| | N 39.149029 | W 80.429878 |

| RECORD OWNER | RECORD LOT # | RECORD AREA OF LOT | AREA WITHIN LOD |
|-----------------------------------|----------------------|--------------------|-------------------|
| NUTTER USA W | 17-12-0445-0009-0002 | 105.55 AC. | 2.164 AC. |
| RELOT CAROL SUE NUTTER USA W | 17-12-0445-0001-0002 | 87.78 AC. | 4.136 AC. |
| NUTTER USA W | 17-12-0445-0010-0003 | 86.87 AC. | 4.187 AC. |
| BANDWATER WILLIAM W III & LINDA L | 17-12-0445-0031-0003 | 247.81 AC. | 11.933 AC. |
| TOTAL LIMIT OF DISTURBANCE | | | 22.420 AC. |

THIS DRAWING IS CONSIDERED THE BASIS OF A "NOVA" RIGHT AND NOT INTENDED TO BE A WARRANTY FOR THE PROVISIONS, USE, FITNESS, OR SUITABILITY OF ANY EQUIPMENT OR MATERIALS. THE USER ACCEPTS ALL RISKS AND LIABILITY FOR THE USE OF THIS DRAWING AND THE USER RELEASES AND AGREES TO HOLD PENN ENVIRONMENTAL & REMEDIATION, INC. HARMLESS FOR ANY AND ALL DAMAGES, LOSSES, AND COSTS, INCLUDING REASONABLE ATTORNEY'S FEES, THAT MAY BE INCURRED BY THE USER AS A RESULT OF THE USER'S USE OF THIS DRAWING.

| REVISION | DATE | DESCRIPTION |
|----------|---------|---------------------------|
| 1 | 1/22/19 | REVISION FOR DEP COMMENTS |



TITLE SHEET
HG 1208 WELL PAD
GRANT DISTRICT
HARRISON COUNTY, WEST VIRGINIA

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

WEST VIRGINIA 811 CALL BEFORE YOU DIG! Dial 811 or 800.245.4848

APPROVED: MEP 11/26/2018
CHECKED: MEP 10/29/2018
DRAWN: ERM 10/29/2018
PROJECT No.: 0003-P2007778
DRAWING NUMBER: P2007778-001
SHEET 1

Penn E&R
Environmental & Remediation, Inc.
111 RYAN COURT, PITTSBURGH, PA 15205
412-722-1222

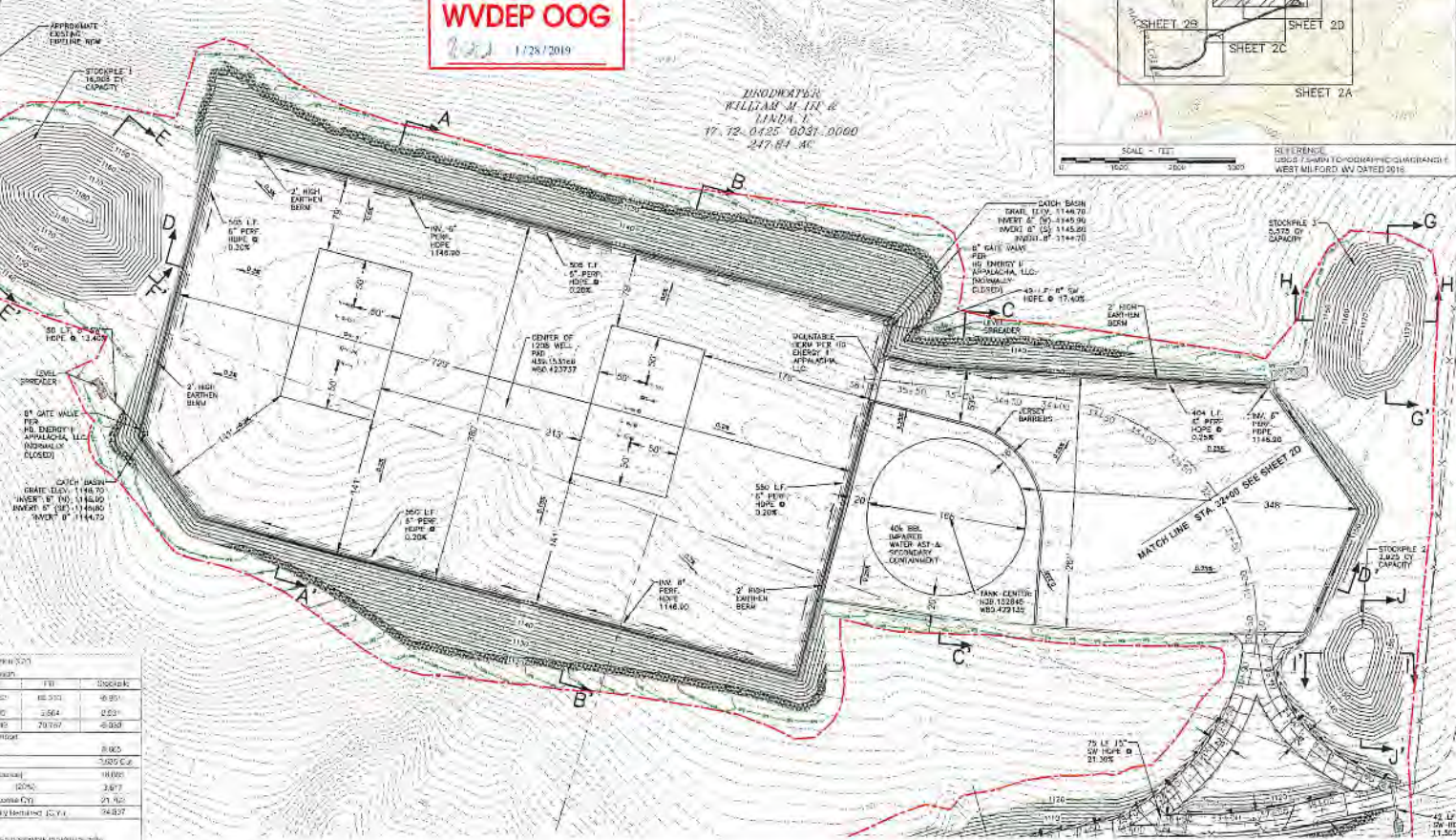
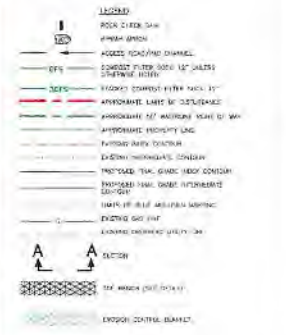
1. SERVICE UTILITY LINES ARE NOT SHOWN ON THIS PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MARKING, AND REPAIRING ACCESSORY TO INSURE CONTINUAL SERVICE.

S:\PROJECT FILES\4400-P2007778 - HG 1208 WELL PAD\172022019 - 10:35 AM

33 03 33

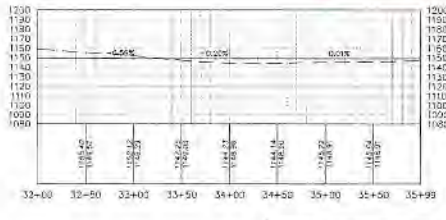
APPROVED WVDEP OOG
1/28/2019

INDICATED BY WILLIAM M. III & LINDA Y. 17.72-0423-0031.0060 247.84 AC



Estimated Gross Market Value (2013) and Estimated Gross Market Value (2014) table.

Table with columns: WELL #, LAT., LONG.



- NOT WORK SHOWN WITH THE CONSTRUCTION WITH THE SCHEDULE... 1. VERIFICATION OF THE CONSTRUCTION WITH THE SCHEDULE... 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES... 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES... 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES... 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES... 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES... 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES... 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES... 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES... 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES...

REVISIONS table and PROFESSIONAL ENGINEER stamp for William M. III & Linda Y., State of West Virginia, No. 20458.

SITE DEVELOPMENT PLAN
HG 1208 WELL PAD
GRANT DISTRICT
HARRISON COUNTY, WEST VIRGINIA

APPRAISAL: DEP 11/26/2018
DRAWING NUMBER: PADD 773-001 SHEET 2E
111 BERRY ROAD, PITTSBURGH, PA 15205
412-739-1928

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