



 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

Wednesday, March 27, 2019
 WELL WORK PERMIT
 Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC
 5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for NUTTER 1208 N-1H
 47-033-05940-00-00

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: NUTTER 1208 N-1H
 Farm Name: LINDA & WILLIAM W. BRODIE
 U.S. WELL NUMBER: 47-033-05940-00-00
 Horizontal 6A New Drill
 Date Issued: 3/27/2019

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>
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Operator ID County District Quadrangle

2) Operator's Well Number: Nutter 1208 N-1H 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

*S.D.W.
11/11/2018*

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: 20,966'

11) Proposed Horizontal Leg Length: 12,975'

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

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

14) Approximate Saltwater Depths: 1299', 1675'

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

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

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

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

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WV Department of
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WW-6B
(04/15)

4703305940
API NO. 47- - 03/29/2019
OPERATOR WELL NO. Nutter 1208 N-1H
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'	40% excess yield = 1.20, CTS
Coal/Storage	13 3/8"	NEW	J-55	68	1890'	1890'	40% excess yield = 1.20, CTS
Intermediate	9 5/8"	NEW	J-55	40	2700'	2700'	40% excess yield Lead 0% Excess Tail <input checked="" type="checkbox"/>
Production	5 1/2"	NEW	P-110	23	20966'	20966'	20% excess yield = 1.19, tail yield = 1.19 <input checked="" type="checkbox"/>
Tubing							
Liners							

SDW
11/11/2018

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"	24"	.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 Tail <input checked="" type="checkbox"/>
Production	5 1/2"	8 1/2"	.415	14520	12500	Type 1/Class A	20% excess yield = 1.19, tail yield 1.19 <input checked="" type="checkbox"/>
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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WW-6B
(10/14)

API NO. 47- _____ - _____
OPERATOR WELL NO. Nutter 1208 N-1H
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 12975 lateral length, 20,966 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: 14.5 ppg POZ-PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170, Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess, Lead Yield=1.19, Tail Yield=1.94, CTS

25) Proposed borehole conditioning procedures:

Conductor - Ensure the hole is clean at TD.
Fresh Water - 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.

*Note: Attach additional sheets as needed.

05940



**1208 N-1H
Marcellus Shale Horizontal
Harrison County, WV**

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Ground Elevation	1149'	1208 N-1H SHL	14218955.94N 180360167E
Azm	340.538°	1208 N-1H LP	14218747.8N 1801393.5E
WELLBORE DIAGRAM		1208 N-1H BHL	14230981.95N 1797070.39E

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	
	24"	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						
	8.5" Vertical	5-1/2" 23# P-110 HC CDC HTQ	Speechley	2895	2913	9.0ppg SOBMM	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						
			8.5" Curve	5-1/2" 23# P-110 HC CDC HTQ	West Falls	4770		6015			11.5ppg-12.5ppg SOBMM
Rhinestreet					6015	6290					
Cashaqua					6290	6491					
Middlesex					6491	6571					
West River					6571	6664					
Burkett					6664	6690					
Tully Limestone					6690	6794					
Hamilton	6794	7013									
8.5" Lateral	5-1/2" 23# P-110 HC CDC HTQ	Marcellus	7013	7064	11.5ppg-12.5ppg SOBMM	Run 1 spiral centralizer every 3 joints from the 1st 5.5" long joint to the top of the curve.					
		TMD / TVD (Production)	20966	7050							
		Onondaga	7064								

LP @ 7050' TVD / 7986' MD

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

+/-12980' ft Lateral

TD @ +/-7050' TVD
+/-20966' MD

X=centralizers

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

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	

Nutter 1208 Well Pad (N-1H to N-5H)
Cement Additives

033-5940

Material Name	Material Type	Material Description	CAS #																		
Premium NE-1	Portland Cement	Premium NE-1 is a portland cement with early compressive strength properties.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Portland cement</td> <td>90 - 100</td> <td>65997-15-1</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> <tr> <td>Magnesium oxide</td> <td>1 - 5</td> <td>1309-48-4</td> </tr> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>0.1 - 1</td> <td>14808-60-7</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Portland cement	90 - 100	65997-15-1	Calcium oxide	1 - 5	1305-78-8	Magnesium oxide	1 - 5	1309-48-4	Crystalline silica: Quartz (SiO2)	0.1 - 1	14808-60-7			
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Bentonite	Extender	Commonly called gel, it is a clay material used as a cement extender and to control excessive free water.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>bentonite</td> <td>90 - 100</td> <td>1302-78-9</td> </tr> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	bentonite	90 - 100	1302-78-9	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7									
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Calcium Chloride	Accelerator	A powdered, flaked or pelletized material used to decrease thickening time and increase the rate of strength development	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Calcium chloride</td> <td>90 - 100</td> <td>10043-52-4</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Calcium chloride	90 - 100	10043-52-4												
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Cello Flake	Lost Circulation	Graded (3/8 to 3/4 inch) cellophane flakes used as a lost circulation material.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table>	Ingredient name	%	CAS number	No hazardous ingredient														
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FP-13L	Foam Preventer	FP-13L is a clear liquid organic phosphate antifoaming agent used in cementing operations. It is very effective minimizing air entrapment and preventing foaming tendencies of latex systems.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Tributyl phosphate</td> <td>90 - 100</td> <td>126-73-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Tributyl phosphate	90 - 100	126-73-8												
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Granulated Sugar	Retarder	Used to retard cement returns at surface.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Sucrose</td> <td>90 - 100</td> <td>57-50-1</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Sucrose	90 - 100	57-50-1												
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EC-1		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>Calcium magnesium oxide</td> <td>90 - 100</td> <td>37247-91-9</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Calcium magnesium oxide	90 - 100	37247-91-9												
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MPA-170	Gas Migration	Multi-purpose polymer additive used to control free fluid, fluid loss, rheology, and gas migration.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table>	Ingredient name	%	CAS number	No hazardous ingredient														
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Poz (Fly Ash)	Base	A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7	Calcium oxide	1 - 5	1305-78-8									
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R-3	Retarder	A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Organic acid salt</td> <td>40 - 50</td> <td>Trade secret.</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Organic acid salt	40 - 50	Trade secret.												
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S-5	Surfactant	Used to water wet casing and formation to facilitate cement bonding.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>2-Butoxyethanol</td> <td>20 - 30</td> <td>111-76-2</td> </tr> <tr> <td>Proprietary surfactant</td> <td>10 - 20</td> <td>Trade secret.</td> </tr> <tr> <td>D-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.
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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WV Department of Environmental Protection
Signal Collection

03/29/2019

033-5940

Diane White

From: Josh Hinton
Sent: Tuesday, December 18, 2018 10:06 AM
To: Diane White; Timothy Roush
Subject: FW: HG Nutter 1208 1H Well Plans_DET1 APPROVAL
Attachments: NUTTER 1H-1208 WELLBORE.pdf

From: James H Moore Iii [mailto:James.H.Moore.Iii@dominionenergy.com]
Sent: Tuesday, December 18, 2018 9:02 AM
To: Josh Hinton <jhinton@hgenergyllc.com>; Dale Fidurko <dfidurko@hgenergyllc.com>
Cc: Ronald L. Walden <ronald.l.walden@dominionenergy.com>
Subject: HG Nutter 1208 1H Well Plans_DET1 APPROVAL

Josh/Dale,

We have reviewed the preliminary plans for the Nutter 1208-1H well and approve. Let me know if you have questions or concerns..

Thanks,

Jamie.

Jamie Moore
Geologist II
Gas Storage Department
Dominion Energy Transmission, Inc.
925 White Oaks Boulevard
Bridgeport, WV 26330
Office-681-842-3372
Work Cell-304-859-1561



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Office of Oil and Gas
DEC 19 2018
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Environmental Protection

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1208 N-1H
Marcellus Shale Horizontal
Harrison County, WV

1208 N-1H SHL

14218955.94N 1803601.67E

Ground Elevation

1149'

1208 N-1H LP

14218747.8N 1801393.5E

Azm

340.538°

1208 N-1H BHL

14230981.95N 1797070.39E

WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Sandy Interval = 60' 1851' - 1850' = 1' (Dr. 2m 9g) 1800' - 1801' (Dr. 1m 9g)</p>	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
	24"	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	Kittanning 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 / Garitz (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					
	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					
Rhinestreet			6015	6290	11.5ppg-12.5ppg SOBM					
Cashaqua			6290	6491						
Middlesex			6491	6571						
West River			6571	6664						
Burkett			6664	6690	11.5ppg-12.5ppg SOBM					
Tully Limestone			6690	6794						
Hamilton			6794	7013						
Marcellus			7013	7064						
TMD / TVD (Production)	20966	7050								
Onondaga	7064									

LP @ 7050' TVD / 7986' MD

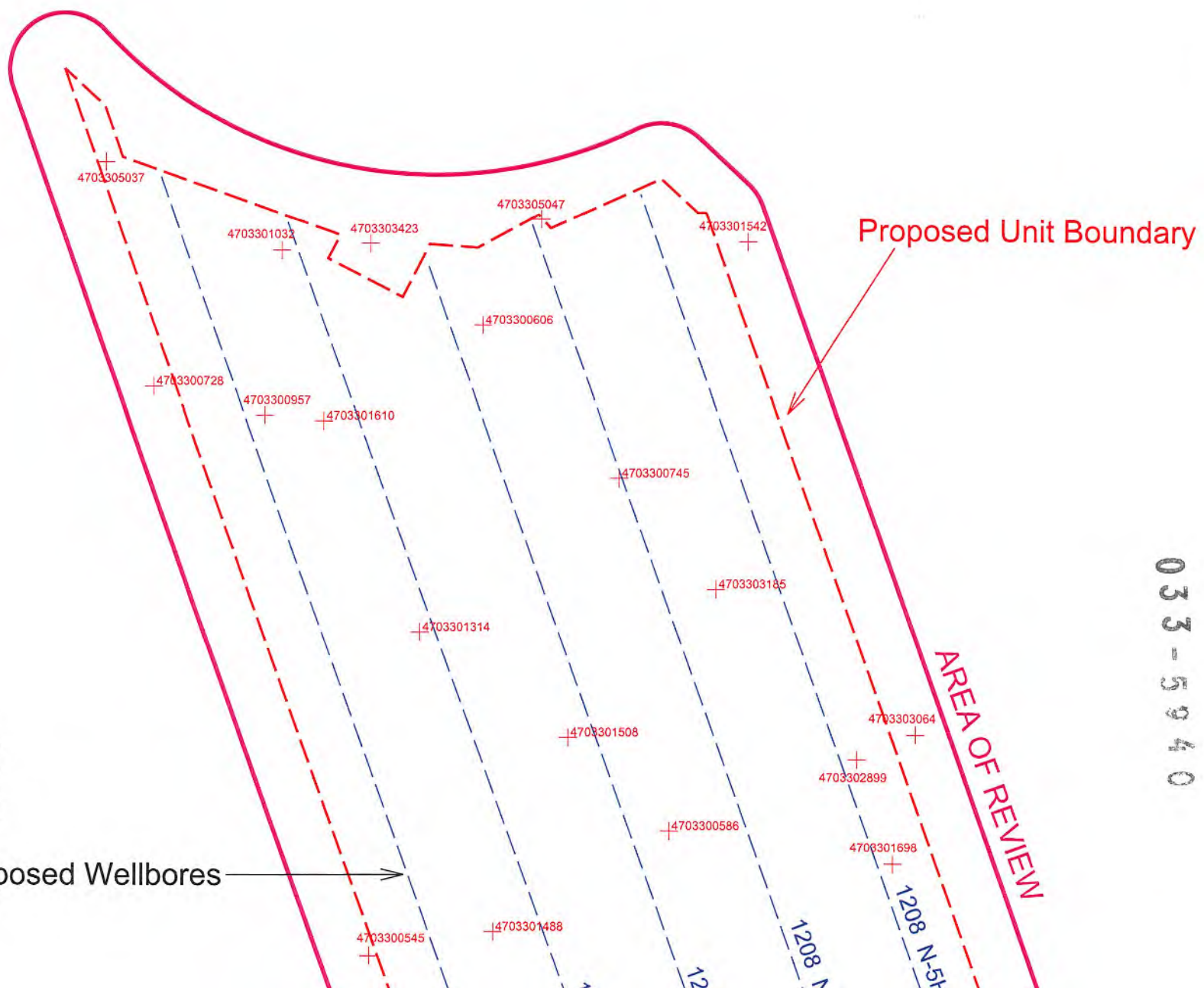
8.5" Hole - Cemented Long String
5-1/2" 23# P-110 HC CDC HTQ

+/-12980' ft Lateral

TD @ +/-7050' TVD
+/-20966' MD

X=centralizers

033-5940



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AREA OF REVIEW

1208 N-1H

1208 N-2H

1208 N-3H

1208 N-4H

4703300592

4703304553

4703301461

4703300563

4703300591

4703301221

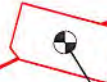
4703300037

4703300197

4703304552


4703300562


4703302258



NUTTER 1208 PAD

Well Key

 Conventional Vertical Well

 Proposed Horizontal Marcellus Well

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

Area of Review for:

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



SCALE: 1" = 1,320'

033-5940

**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	-80.43644
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 Fm	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 Fm	Gas	4382	ACTIVE	39.164871	-80.425798
9	4703300606	Harrison	Bruce Cayton	Dominion Energy Transmission Inc.	Greenland Gap Fm	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 Fm	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 Fm	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 Fm	Gas	2799	ACTIVE	39.184786	-80.428592
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	-80.429896
23	4703302899	Harrison	K M Patton/R Reed 1	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	3011	PLUGGED	39.171995	-80.425239
24	4703303064	Harrison	J Cheuvront (CW-154)	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	2933	PLUGGED	39.172605	-80.423373
25	4703303185	Harrison	Joseph Cheuvront	Dominion Energy Transmission Inc.	Hampshire Grp	Gas	1749	ACTIVE	39.176214	-80.429658
26	4703303423	Harrison	Thad Curry	Dominion Energy Transmission Inc.	Hampshire Grp	Observation	1980	PLUGGED	39.184786	-80.440518
27	4703304552	Harrison	III	Dominion Energy Transmission Inc.	Misc Sands-BNSN/BRLR	Gas	4480	ACTIVE	39.155302	-80.424303
28	4703304553	Harrison	Linda J Maxwell	Dominion Energy Transmission Inc.	Misc Sands-BNSN/BRLR	Gas	4638	ACTIVE	39.164873	-80.419461
29	4703305037	Harrison	Post Heritage LLC	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	5126	ACTIVE	39.186816	-80.448904
30	4703305047	Harrison	Robert M Lewis/C J Lewis	Alliance Petroleum Corp.	Greenland Gap Fm	Gas	4418	ACTIVE	39.185366	-80.435114

SOURCE: WVGES DATASET (2017) and WVDEP WEBSITE

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

03/29/2019

033-5940

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

03/29/2019

033 - 5940

December 5, 2018

EQT Production Company
115 Professional Place
Bridgeport, WV 26330

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Diane White

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

47 03 3 059/0
03/29/2019

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)
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Diane White

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

03/29/2019

033 - 5940

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)
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Sincerely,

Diane White

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4703305940

03/29/2019

WW-9
(4/16)

API Number 47 - _____ - _____
Operator's Well No. Nutter 1208 N-1H

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 _____)

*SOW
11/11/2018*

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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air, Freshwater and SOBM

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

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

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

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

-Landfill or offsite name/permit number? See Attached

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

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

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

Company Official Signature Diane White

Company Official (Typed Name) Diane White

Company Official Title Agent

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Office of Oil and Gas

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WV Department of
Environmental Protection

Subscribed and sworn before me this 27th day of November, 2018

Cassidy Boardman Notary Public

My commission expires 7/31/2022



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
Tall Fescue	<u>40</u>
Ladino Clover	<u>5</u>

Seed Type	lbs/acre
Tall Fescue	<u>40</u>
Ladino Clover	<u>5</u>

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: SPOWanette

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

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

Title: Oil & Gas Inspector

Date: 11/11/2018

Field Reviewed? () Yes () No

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Cuttings Disposal/Site Water

033 - 5940

Cuttings -Haul off Company:

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

03/29/2019

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

Environmental Coordination Services & Recycling (ECS&R)
8287 US Highway 19
Cochranston, PA 16314
814-425-7773

Disposal Locations:

Apex Environmental, LLC Permit # 06-08488
11 County Road 78
Amsterdam, OH 43908
740-543-4889

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

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

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

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

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

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

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

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

Brooke County Landfill Permit # SWF-103-97 / WV 0109029
Rd 2 Box 410
Colliers, WV 26035
304-748-0014

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033-5940

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

03/29/2019

Energy Solutions, LLC Permit # UT 2300249
428 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 M1D020906814
3947 US 131 North, PO Box 1030
Kalkaska, MI 49646
281-258-9961

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 Commerca Drive
Moorestown, NJ 08057

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

Force, Inc.
1380 Rta. 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

Burna 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

Nichols 1-A (SWIW #13)
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
Lowelville, OH 44435
330-536-6825

Grosella (SWIW #34)
Permit # 4096
Rt. 88
Garrattsville, OH
718-275-4316

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

Kamble 1-D Well
Permit # 8780
7675 East Pike
Norwich, Oh 43767
614-648-8898
740-796-6485

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WV Department of
Environmental Protection

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

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
11/11/2018*

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033-5940

Adams #2 (Buckeye Brine, LLC)
2205 Westover Road
Austin Tx 78708
Permit # 34-031-2-7178
740-575-4484
512-478-6545

Adams #3 (Buckeye Brine, LLC)
Permit #34-031-2-7241-00-00
2580 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
412-329-7275

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

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

OH UIC #1 Bu keye UIC Barneaville 1 & 2
CNX Gas Company, LLC
1000 Consol Energy Drive
Permit # 34-013-2-0609-00-00
Permit # 34-013-2-0614-00-00
304-823-6568

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

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

03/29/2019

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Reclamation Plan For:
NUTTER 1208 PAD

NUTTER 1208 PAD

Wm. & Linda
 Brodwater
 TM 425, Parcel 31

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

Lisa M. Nutter
 TM 445, Parcel 10

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

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

Fill Area

Fill Area

Topsoil
 Stockpile

Topsoil
 Stockpiles

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

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

40K BBL
 AST

~720'

~380'



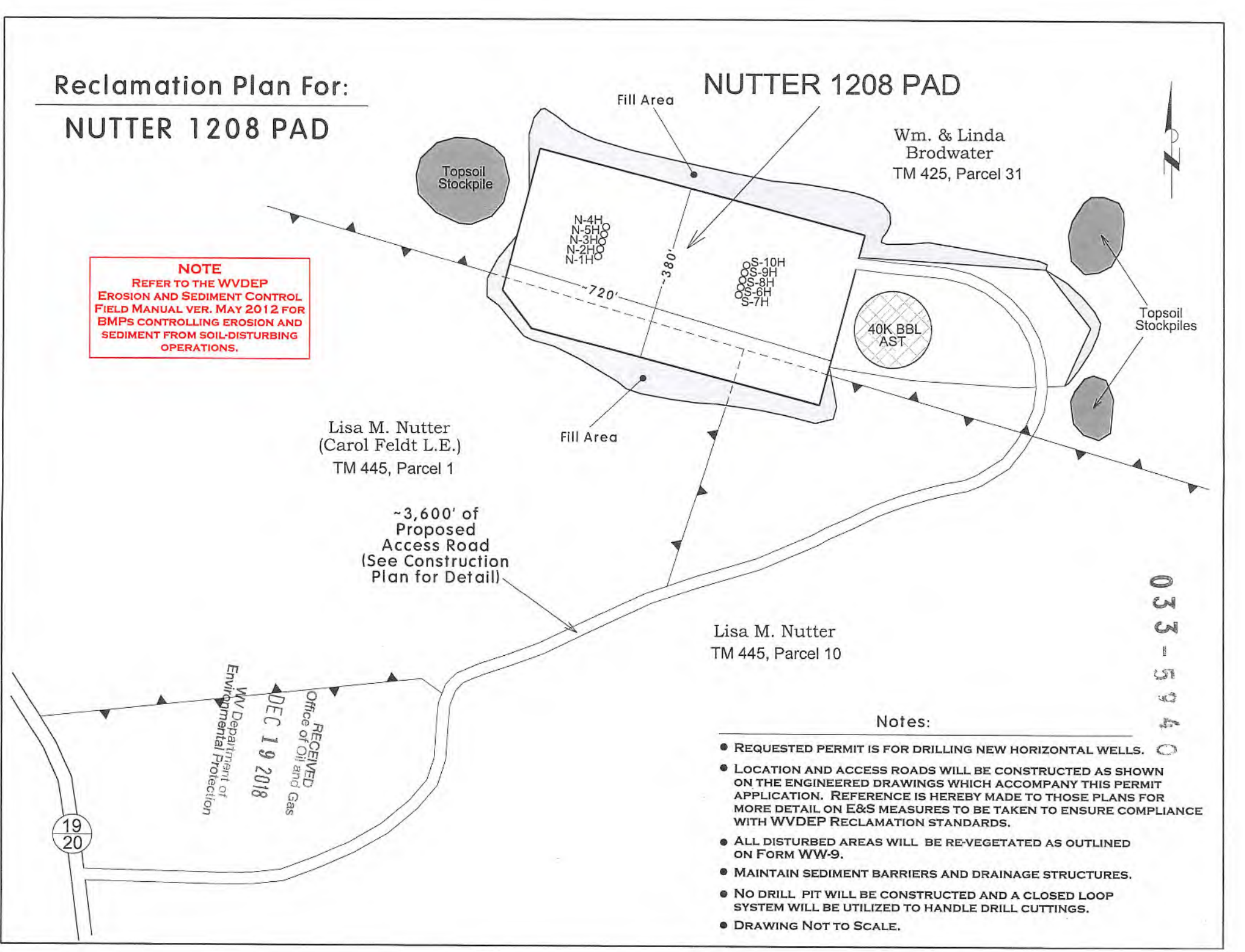
033-5940

Notes:

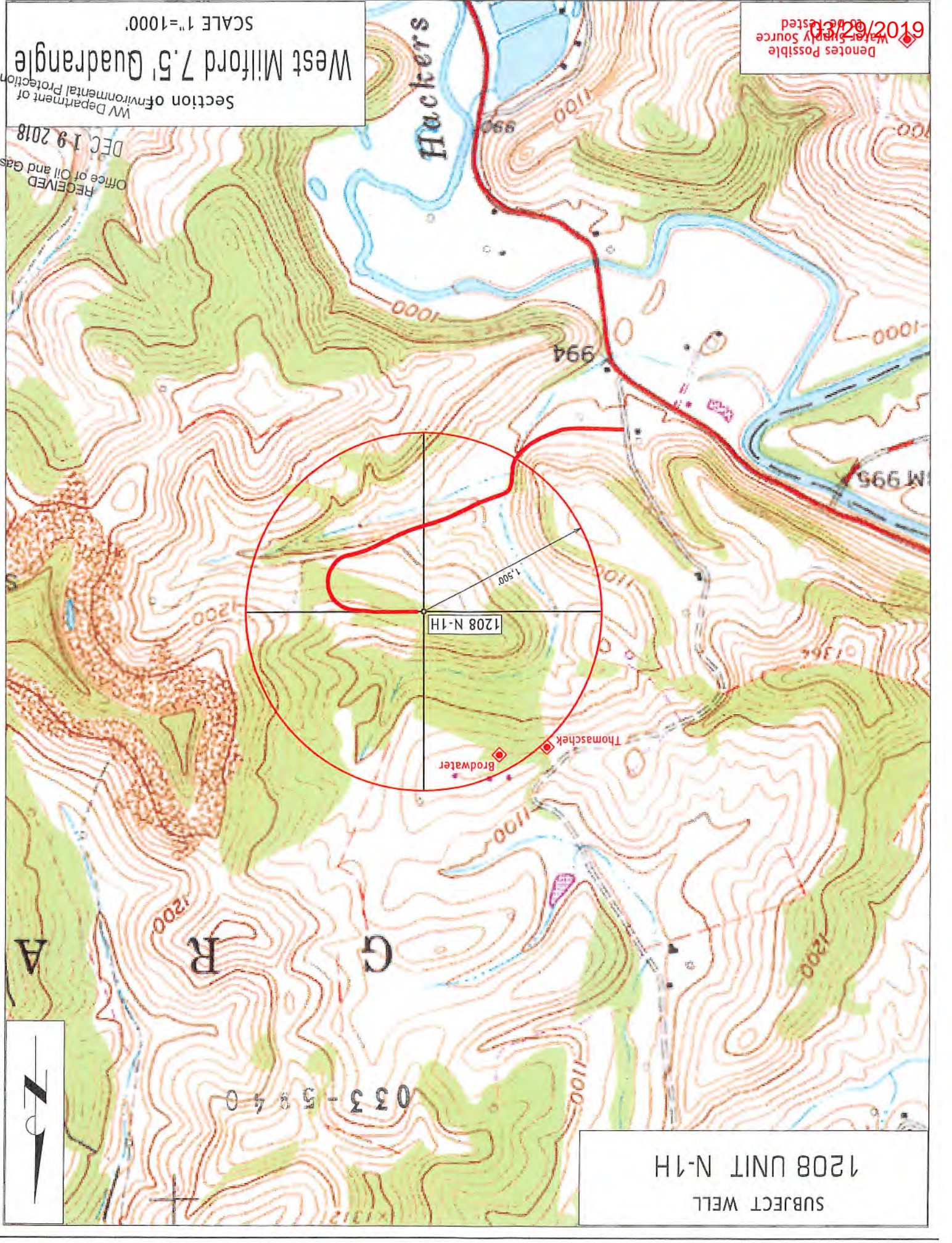
- REQUESTED PERMIT IS FOR DRILLING NEW HORIZONTAL WELLS.
- LOCATION AND ACCESS ROADS WILL BE CONSTRUCTED AS SHOWN ON THE ENGINEERED DRAWINGS WHICH ACCOMPANY THIS PERMIT APPLICATION. REFERENCE IS HEREBY MADE TO THOSE PLANS FOR MORE DETAIL ON E&S MEASURES TO BE TAKEN TO ENSURE COMPLIANCE WITH WVDEP RECLAMATION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

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 WV Department of
 Environmental Protection

19
 20



6102/03/20
Denotes Possible
Water Supply Source
Not Tested



West Milford 7.5' Quadrangle
Section of Environmental Protection
WV Department of
SCALE 1"=1000'

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DEC 19 2018

SUBJECT WELL
1208 UNIT N-1H



A R G

033-3340

1208 N-1H

Brodwater

Thomaschek

M 995

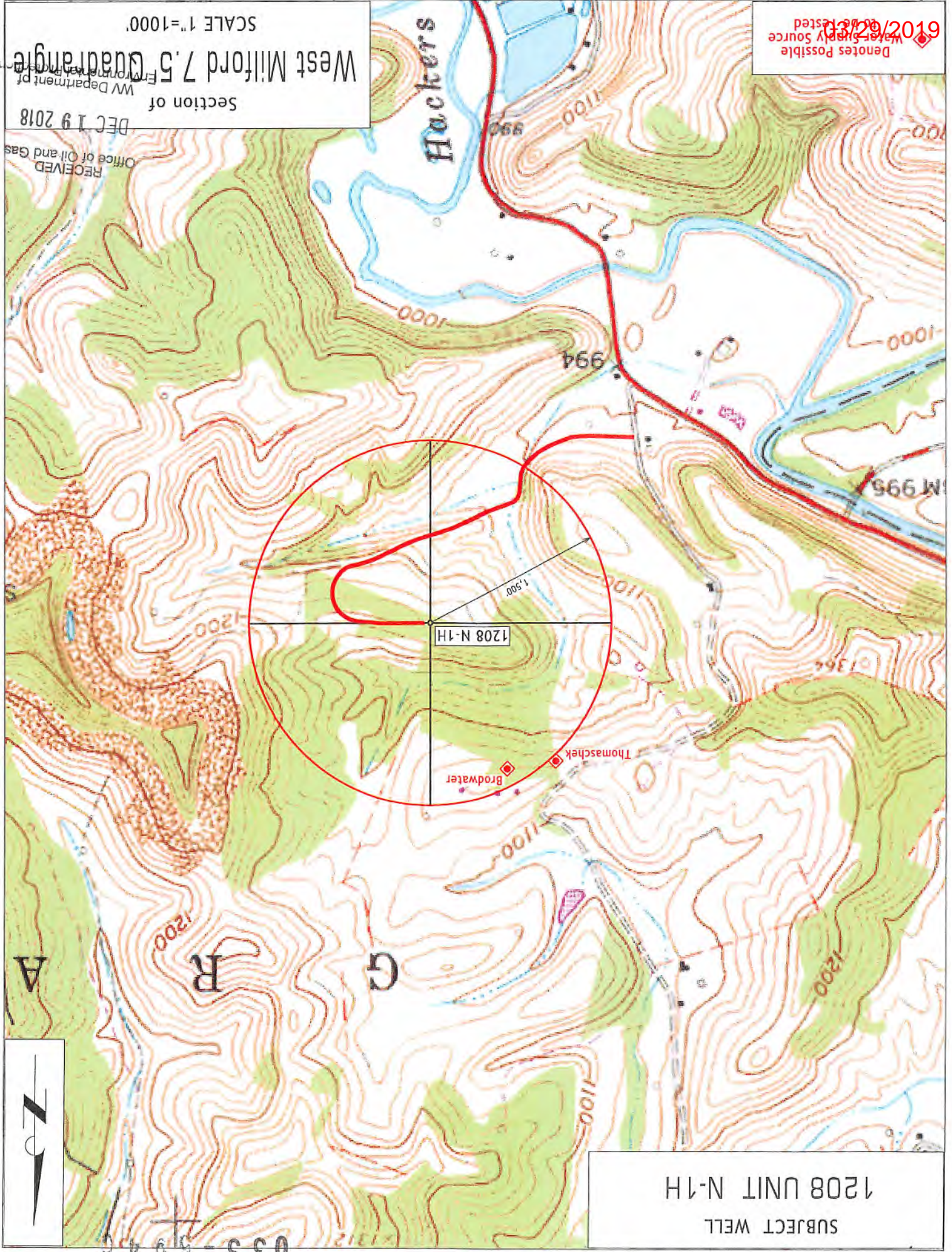
Hackers

Denotes Possible
Water Supply Source
6102/02/2018
Not Tested

SCALE 1"=1000'

Section of
W Department of
Environmental
West Milford 7.5 Quadrangle

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DEC 19 2018



SUBJECT WELL
1208 UNIT N-1H



0 3 3
5 9 4 0

Reclamation Plan For: NUTTER 1208 PAD

NUTTER 1208 PAD

Wm. & Linda
Brodwater
TM 425, Parcel 31

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

Lisa M. Nutter
TM 445, Parcel 10

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

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

Fill Area

Fill Area

Topsoil
Stockpile

Topsoil
Stockpiles

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

S-10H
S-9H
S-8H
S-6H
S-7H

40K BBL
AST

~720'

~380'



033-5940

Notes:

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- 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.
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- DRAWING NOT TO SCALE.

19
20

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WV Department of
Environmental Protection

HG Energy II Appalachia, LLC
Well No. 1208 N-1H

8,685' to Bottom Hole
2,231' 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

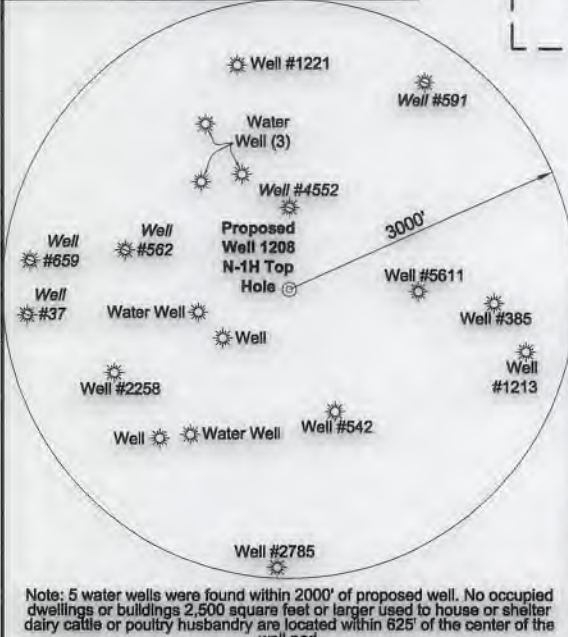
03/29/2019

Tag	Bearing	Dist.
L1	S 36°48' E	1,226.4'
L2	S 21°29' E	1,242.3'
L3	S 89°47' W	1,355.7'
L4	N 68°11' W	1,178.0'
L5	S 84°37' W	2,218.0'



Notes:
Well No. 1208 N-1H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,218,955.94' E: 1,803,601.67'
Landing Point Coordinates
N: 14,218,747.80' E: 1,801,393.50'
Bottom Hole Coordinates
N: 14,230,981.95' E: 1,797,070.39'

Notes: Well No. 1208 N-1H
West Virginia Coordinate System of 1927, South Zone based upon Differential GPS Measurements.
Top Hole coordinates Bottom Hole coordinates
Latitude: 39°09'11.55" Latitude: 39°11'10.86"
Longitude: 80°25'28.34" Longitude: 80°26'50.34"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,333,946.438m N: 4,337,611.974m
E: 549,738.887m E: 547,748.150m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.



FILE NO: 195-36-G-18
DRAWING NO: 1208 N-1H 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

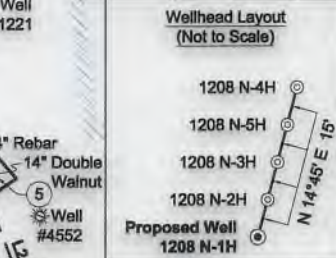
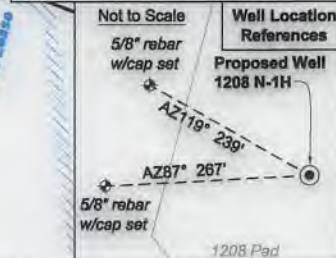
DATE: November 13 2018
OPERATOR'S WELL NO. 1208 N-1H
API WELL NO. 47-033-05940
STATE COUNTY PERMIT

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: 20,966' MD

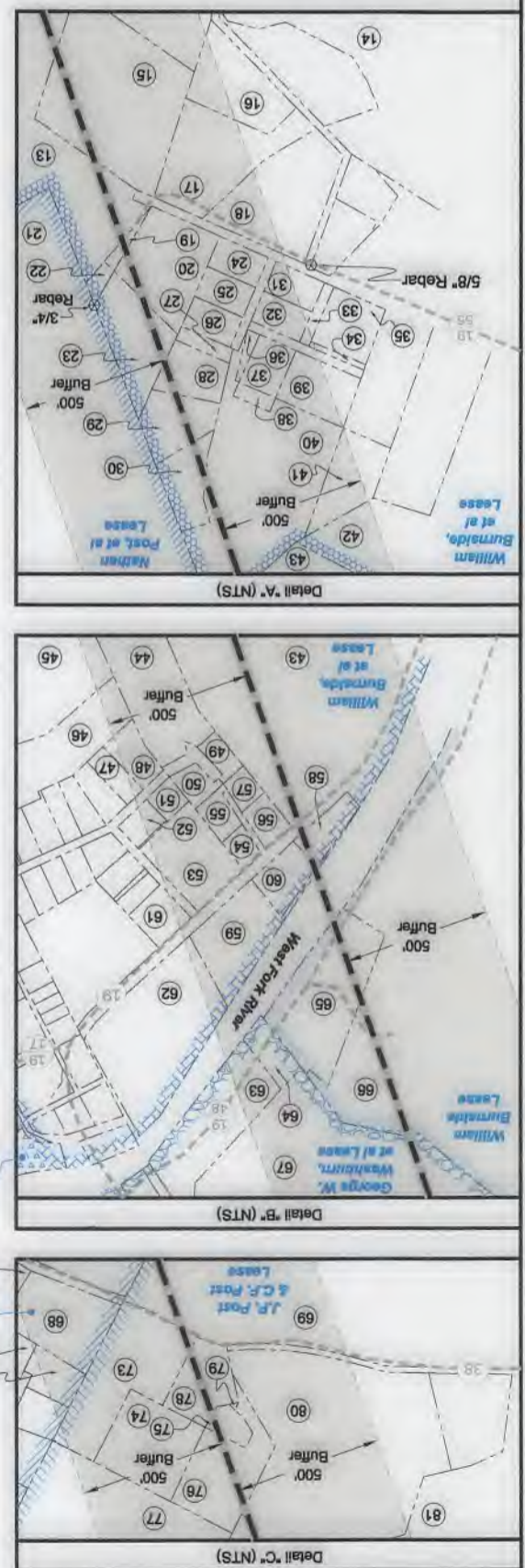
WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White
ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101 Parkersburg, WV 26101



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.)



LONGITUDE 80 - 25 - 00
4,965' to Top Hole
8,005' to Bottom Hole



FILE NO: 195-36-G-18
DRAWING NO: 1208 N-1H Well Plat
SCALE: 1" = 1500'
MINIMUM DEGREE OF ACCURACY:
Submitter
PROVEN SOURCE OF ELEVATION:
CORS, Bridgeport, WV

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

DATE: November 13 20 18
OPERATOR'S WELL NO. 1208 N-1H
API WELL NO
STATE 47
COUNTY 033
PERMIT

No.	TM/Par	Owner	Bk/Pg	Ac.
1	425 / 31	Linda & William W. Brodwater III	1410 / 1045	247.84
2	445 / 2			
3	445 / 10	Lisa M. Nutter	WB 687 / 445	66.87
4	445 / 1			
5	425 / 31.2	Linda & William W. Brodwater III	1343 / 1279	1.16
6	425 / 31.1	Dona R. & David R. Scarff	1360 / 652	1.00
7	424 / 52	Bernice A. Kaessucker	1186 / 552	2.17
8	424 / 52.2	David Kaessucker	1533 / 1283	2.38
9	424 / 52.1	Robert J. Brightbill	1560 / 293	138.98
10	425 / 31.3	Gary S. & Malinda M. Brodwater	1354 / 176	2.00
11	424 / 52.3	Robert J. Brightbill	1560 / 293	4.54
12	424 / 46	Edward M. Bocklin	1152 / 52	15.00
13	424 / 30.1	John & Paula Zirkle	1323 / 665	45.62
14	424 / 45.8	Gregory & Kimberly Bocklin	1406 / 1029	17.26
15	424 / 30	John & Paula Zirkle	1323 / 670	5.00
16	424 / 58		1205 / 882	1.82
17	424 / 57	Charlotta Ann Heater	1208 / 934	2.44
18	424 / 56	John & Paula Zirkle	1352 / 18	2.69
19	424 / 28.1	John & Paula Zirkle	1323 / 665	0.13
20	424 / 28	Ovid & Joy Bell	1183 / 224	1.905
21	424 / 13	Gregory Gail Burnside	1356 / 146	34.60
22	424 / 29	John & Paula Zirkle	1323 / 665	0.15
23	424 / 28.2	Ovid & Joy Bell	1426 / 290	1.569
24	424 / 28.1	Gerold & Doris Lynch	1486 / 290	0.45
25	424 / 28.3	Kazimer A. & Pamela L. Kapts	1040 / 590	0.45
26	424 / 28.6		1439 / 543	0.23
27	424 / 55.1	Claudia Tenney	1548 / 73	0.808
28	424 / 55.3	Amber Brooke Gaines	1494 / 524	1.00
29	424 / 55.3	James & Rhonda Kirby	1378 / 138	0.874
30	424 / 65	Scott Louk	1387 / 572	0.45
31	424 / 26	Karl & Russel J. Myers II	WB123 / 296	0.45
32	424 / 26.4	Elaine R. Nutter	1116 / 729	0.18
33	424 / 26.7	Frankie J. Gervella	1164 / 499	0.09
34	424 / 26.8	Frankie J. & Lorraine Gervella	1061 / 583	0.897
35	424 / 26.5		1323 / 1103	0.086
36	424 / 53.3	Rockie & Josephine Gibson	1082 / 365	0.96
37	424 / 53.1		1067 / 1085	6.04
38	424 / 53.2	Gary & Cheryl Drummond	1070 / 516	1.12
39	424 / 53.2		1170 / 689	5.96
40	424 / 53	Joe & Karen Gonzalez	WB 87 / 514	41.13
41	424 / 26.1		1444 / 1175	3.18
42	424 / 26.4	Joseph H. Mason	WB119 / 1137	22.25
43	424 / 6.7	Wendy G. Richards	1537 / 523	2.98
44	424 / 5	Joseph H. Mason & Dede Mason Brown	988 / 738	0.34
45	424 / 10	Christan & Katherine Meeker	1345 / 808	0.56
46	2003 / 65	George & Madge Hennen	1501 / 702	0.27
47	2003 / 52	Todd Joseph Brown	1331 / 1127	0.34
48	2003 / 53	Jason & Teresa Allen	999 / 805	0.23
49	424 / 6.2	Carl & Carolyn James	1454 / 295	0.32
50	2003 / 54.1	Glenn Kirkpatrick	1563 / 672	2.06
51	2003 / 54	James S. Murphy	1388 / 135	0.30
52	2003 / 54	Dale R. Holden	1364 / 506	0.34
53	2003 / 55	Kimberly Sue Smithson	1212 / 1084	1 Lot
54	424 / 6.5	John L. Homer	1223 / 656	0.26
55	424 / 6.3		1267 / 1158	0.52
56	424 / 6.1	Renard D. & Gladis G. Rinehart	1227 / 767	1.56
57	424 / 6.4		1384 / 185	0.85
58	424 / 7.1	Carl D. & Joyce E. Ward	1488 / 951	0.71
59	424 / 8	Ronnie & Sandy Cochran	953 / 526	3.77
60	424 / 7	Melinda Bibbee	1191 / 266	2.47
61	2003 / 56	Billy L. & Barbara E. Nutter	1322 / 1140	0.496
62	404 / 50	Bethel MFC Church	1387 / 584	2.75
63	404 / 55.12	Terence Washburn	1387 / 583	283.21
64	404 / 55.13	William Michael McDonald	1332 / 1140	42.37
65	404 / 49	Terence L. Washburn	1374 / 207	1.75
66	424 / 2	Frank R. & Shelby J. Costello	1329 / 346	96.12
67	404 / 55.1	Perry L. & Deborah J. Post	1282 / 548	0.56
68	2901 / 194	Ronzel C. & Sandra K. Richards	1246 / 593	0.51
69	404 / 43	Eugene R. & Lisa D. Messer	1486 / 488	0.56
70	2901 / 195.1	Kenneth R. & Helen M. Queen	1016 / 123	1.68
71	2901 / 196	Richard E. Lawrence	1292 / 1071	1.84
72	404 / 33.2	Kenneth R. & Helen M. Queen	1333 / 192	0.305
73	404 / 33.6	Marsha Romine	1333 / 190	1.82
74	404 / 33.8	Patricia R. & William T. Douglass	1389 / 93	11.80
75	404 / 33.4	Lisa A. Moore	1389 / 1030	1.10
76	404 / 33.1	Marsha Romine	1333 / 188	0.008
77	404 / 33.5	Marsha Romine	1399 / 87	14.74
78	404 / 33	William F. & Catherine A. Rapping	1399 / 81	13.56
79	404 / 32.7	Marjorie E. & Morrell E. Rapping, Jr.	1399 / 71	12.70
80	404 / 32.5	Richard P. & Carol L. Rapping	1399 / 155	10.43
81	404 / 32.4	Post Heritage, LLC	1399 / 76	13.26
82	404 / 32.4	Nancy Jean Murphy	1399 / 155	68.80
83	404 / 32.4	Post Heritage, LLC	932 / 456	142.74
84	404 / 32.5	Mary Ann Tiano		
85	404 / 32			
86	404 / 7			
87	404 / 7			
88	404 / 7			
89	404 / 7			
90	404 / 7			
91	404 / 7			

WELL OPERATOR: HG Energy II Appalachia, LLC
ADDRESS: 5260 Dupont Road Parkersburg, WV 26101
DESIGNATED AGENT: Diane C. White
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1,149' WATERSHED: Middle West Fork Creek
SURFACE OWNER: Linda & William W. Brodwater III
ROYALTY OWNER: Leeman B. Maxwell Heirs, et al
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY)
 PLUG AND ABANDON CLEAN OUT AND REPLUG
TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 20,966 MD
7,050' TVD

5/10/2019 10:53 AM

WW-6A1
(5/13)

Operator's Well No. Nutter 1208 N-1H

**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****

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

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

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

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

Well Operator: HG Energy II Appalachia, LLC

By: Diane White *Diane White*

Its: Agent

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HG Energy II Appalachia, LLC

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WV Department of
Environmental Protection

1208 N-1H LEASE CHAIN

TRACT #	LEGACY LEASE NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE				
A	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, 17-12-0444-0021-0001, 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				
				B	FK065462	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 p/o 17-12-0425-0031-0000 p/o 17-12-0425-0031-0003 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	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.	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	FARMOUT AGREEMENT	1601					581				
		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		WM. BURNSIDE AND RUHARY BURNSIDE, HIS WIFE, AKA RHHAMA BURNSIDE	E.J. WEST (212 ACRES)	NOT LESS THAN 1/8	118	353				
				E.J. WEST	CONSOLIDATED OIL COMPANY	ASSIGNMENT	118	358				

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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
JOSEPH CHEUVRONT, CHARLES CHEUVRONT, AND HARRIET CHEUVRONT	P.H. GAFFNEY (200 ACRES)	NOT LESS THAN 1/8	184	309
E.F. WILLIAMSON AND P.H. GAFFNEY DOING BUSINESS AS F.E. WILLIAMSON & CO.,	J.F. DONALDSON	ASSIGNMENT	222	83
J.F. DONALDSON	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	222	79
THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	236	111
PITTSBURGH AND WEST VIRGINIA GAS COMPANY	PHILADELPHIA OIL COMPANY	ASSIGNMENT	504	353
PITTSBURGH AND WEST VIRGINIA GAS COMPANY	EQUITABLE GAS COMPANY	CONVEYANCE	714	159
EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	790	135

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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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					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			
D	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 GAS 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				
				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				
								WILLIAM AND RUHAMA BURNSIDE	RESERVE GAS COMPANY	NOT LESS THAN 1/8	193	444
								RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	MERGER/NAME CHANGE	37	350
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	903					179				
FAYETTE COUNTY GAS COMPANY	HOPE NATURAL GAS	ASSIGNMENT	201					3				
W.B. BERRY	J&J ENTERPRISES	ASSIGNMENT	1065					271				
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136					250				
J&J ENTERPRISES, BENSON DRILLING ASSOCIATION NO. 1	ENSOURCE, INC.	ASSIGNMENT	1187					246				
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51					795				
J&J ENTERPRISES	EASTERN AMERICAN ENERGY CORPORATION	MERGER/NAME CHANGE	1200					1110				
ENSOURCE, INC.	UMC PETROLEUM CORPORATION	MERGER/NAME CHANGE	WVSOS									
EASTERN AMERICAN ENERGY CORPORATION	UMC PETROLEUM CORPORATION	ASSIGNMENT	1226					1040				
CNG TRANSMISSION CORPORATION	UMC PETROLEUM CORPORATION	CONSENT TO ASSIGNMENT	1226					1009				
BENSON DRILLING ASSOCIATES JV1	UMC PETROLEUM CORPORATION	ASSIGNMENT	1262					399				
UMC PETROLEUM CORPORATION	ASHLAND EXPLORATION, INC.	ASSIGNMENT	1263					494				
ASHLAND EXPLORATION HOLDINGS, INC.	BLAZER ENERGY CORPORATION	ASSIGNMENT	1294					299				

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E	FK052931	17-20-0404-0049-0000 17-20-0404-0057-0000 17-20-0404-0058-0000 17-20-0424-0002-0000	BLAZER ENERGY CORP., EASTERN STATES OIL AND GAS, INC. EASTERN STATES EXPLORATION COMPANY, EASTERN SEVEN, LLC	EASTERN SERIES 1997 TRUST	ASSIGNMENT	296	909	
			BLAZER ENERGY CORP., EASTERN STATES OIL AND GAS, INC. EASTERN STATES EXPLORATION COMPANY, EASTERN SEVEN, LLC	EASTERN SERIES 1997 TRUST	ASSIGNMENT		463	
			INC., EQUITABLE PRODUCTION - EASTERN EXPLORATION, INC. FKA EASTERN STATES EXPLORATION COMPANY, EASTERN SEVEN PARTNERS, LP	EASTERN SERIES 1997 TRUST	CORRECTIVE ASSIGNMENT AND STIPULATION OF INTEREST	1324	156	
			EASTERN SEVEN, INC.	EASTERN STATES OIL & GAS, INC.	ASSIGNMENT	1316	562	
			EASTERN STATES OIL AND AS, INC.	BLAZER ENERGY CORPORATION	MERGER/NAME CHANGE	58	98	
			CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION CORPORATION	MERGER/NAME CHANGE	59	1227	
			DOMINION TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	Third Amendment to Farmout Agreement	1621	1295	
G	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 17-20-0404-0042-0000 17-20-0404-0043-0000 17-20-0404-0043-0001 17-20-0404-0043-0002 17-20-0404-0043-0003 17-20-0404-0043-0004 17-20-0404-0043-0005 17-20-0404-0043-0006 17-20-0404-0043-0007 17-20-0404-0043-0008 17-20-0404-0001-0000 17-20-0404-0002-0000 17-20-0404-0003-0000 17-20-0404-0004-0000	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	

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F	LC052900	17-20-0404-0055-00001	Q101130000	GEO W WASHBURN ET AL RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION EMAX OIL COMPANY CABOT OIL AND GS CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. LARA BETH RAMSBURG CAROLYN S.J. HOOVER JOE LAW	RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION EMAX OIL COMPANY CABOT OI AND GAS CORPORATION ENERVEST APPALACHIA L.P. DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA LLC HG ENERGY II APPALACHIA LLC HG ENERGY II APPALACHIA LLC	NOT LESS THAN 1/8 MERGER/NAME CHANGE MERGER/NAME CHANGE ASSIGNMENT MERGER/NAME CHANGE WELLBORE ASSIGNMENT COUNTERPART ASSIGNMENT CONVEYANCE MERGER/NAME CHANGE MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT NOT LESS THAN 1/8 NOT LESS THAN 1/8 MINERAL DEED		179 508 903 1136 51 1261 1244 1314 58 1621 1615 1615 1606	404 573 179 250 795 1021 755 1012 362 1295 673 680 779
H	FK076181	17-20-0404-0055-0001	Q101069000	OLGA E WASHBURN ET AL CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION EMAX OIL COMPANY CABOT OIL AND GS CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. LARA BETH RAMSBURG CAROLYN S.J. HOOVER JOE LAW	CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION EMAX OIL COMPANY CABOT OI AND GAS CORPORATION ENERVEST APPALACHIA L.P. DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA LLC HG ENERGY II APPALACHIA LLC HG ENERGY II APPALACHIA LLC	NOT LESS THAN 1/8 ASSIGNMENT MERGER/NAME CHANGE WELLBORE ASSIGNMENT COUNTERPART ASSIGNMENT CONVEYANCE MERGER/NAME CHANGE MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT NOT LESS THAN 1/8 NOT LESS THAN 1/8 MINERAL DEED		923 1136 51 1261 1244 1314 58 1621 1615 1615 1606	476 250 795 1021 755 1012 362 1295 673 680 779

033-5940

Adkins, Laura L

From: Diane White <dwhite@hgenergyllc.com>
Sent: Tuesday, March 19, 2019 2:16 PM
To: Adkins, Laura L
Subject: RE: Nutter N-1H 33-05940
Attachments: 1208 N-1H Lease Index Map for WW-6A1 3.19.19.pdf

Laura,
See below for answers and see attached. Tim added the alpha references from the Tract # column on the WW-6A1 to the plat to make the review easier. Please let me know if you need further information.
Thank You,
Diane

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Office of Oil and Gas

MAR 20 REC'D

WV Department of
Environmental Protection

From: Adkins, Laura L [mailto:Laura.L.Adkins@wv.gov]
Sent: Tuesday, March 19, 2019 10:23 AM
To: Diane White <dwhite@hgenergyllc.com>
Subject: Nutter N-1H 33-05940

Diane,

I have reviewed the above referenced permit application and have the following to be addressed so the permit may be issued:

6A1- Is the West Fork River leased by HG at the crossing? [We have license agreements allowing us to cross underneath the river.](#)

6A1- Can you please revise the 6A1 to reflect the tract identification numbers on the plat. I am having a difficult time matching the tracts on the plat with the 6A1. [See Attached, Tim added the alpha references from the WW-6A1 to the plat for a cross reference.](#)

Thank you,

Laura



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

4703 05940
03/29/2019

December 5, 2018

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

RE: Drilling Under Roads – Nutter 1208 N-1H
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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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION

Date of Notice Certification: 12/17/2018

API No. 47- _____
Operator's Well No. Nutter 1208 N-1H
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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>549738.9</u>
County:	<u>Harrison</u>		Northing:	<u>4333946.4</u>
District:	<u>Grant</u>	Public Road Access:	<u>SR 19</u>	
Quadrangle:	<u>West Milford</u>	Generally used farm name:	<u>Nutter</u>	
Watershed:	<u>Middle West Fork Creek</u>			

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

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 <input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED <input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED <input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH) <input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION <input checked="" type="checkbox"/> 5. PUBLIC NOTICE <input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION		OOG OFFICE USE ONLY <input type="checkbox"/> RECEIVED/ NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED/ NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED
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Required Attachments:

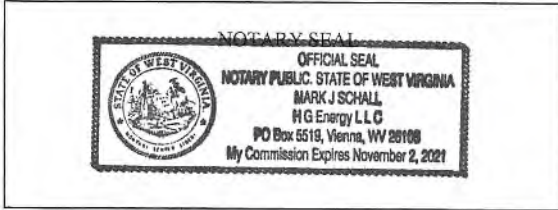
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication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

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Certification of Notice is hereby given:

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

Well Operator:	<u>HG II Appalachia, LLC</u>	Address:	<u>5260 Dupont Road</u>
By:	<u>Diane White</u>		<u>Parkersburg, WV 26101</u>
Its:	<u>Agent</u>	Facsimile:	<u>304-863-3172</u>
Telephone:	<u>304-420-1119</u>	Email:	<u>dwhite@hgenergyllc.com</u>



Subscribed and sworn before me this 17th day of December, 2018.

[Signature] 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.

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

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

Date of Notice: 12/04/18 Date Permit Application Filed: 12/05/18

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

*Please attach additional forms if necessary

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Environmental Protection

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

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

Well Location Restrictions

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

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WV Department of Environmental Protection

WW-6A
(8-13)

API NO. 47- 033-594
OPERATOR WELL NO. Nutter 1208 N-1H **03/29/2019**
Well Pad Name: Nutter 1208

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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

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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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Environmental Protection

WW-6A
(8-13)

033-5940
API NO. 47- _____ - _____ **03/29/2019**
OPERATOR WELL NO. Nutter 1208 N-1H
Well Pad Name: Nutter 1208

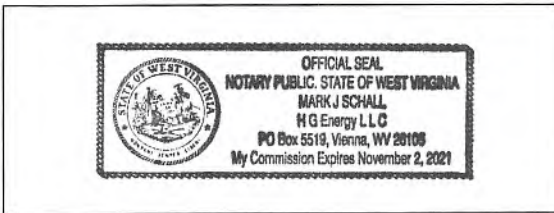
Notice is hereby given by:

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 deprivacyofficer@wv.gov.



Subscribed and sworn before me this 4th day of December, 2018.

[Signature] Notary Public

My Commission Expires 11/2/2021

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WV Department of
Environmental Protection

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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Sturm Environmental Services

033-5940

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 I-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

*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. Bost* RECEIVED
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DEC 19 2018

033-5940

Sturm Environmental Services

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

*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

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Office of Oil and Gas

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CHAIN OF CUSTODY RECORD

STURM ENVIRONMENTAL SERVICES

Main Office:
 STURM ENVIRONMENTAL SERVICES
 BRUSHY FORK ROAD
 P.O. BOX 650
 BRIDGEPORT, WV 26330
 PHONE: 304-623-6549
 FAX: 304-623-6552

STURM ENVIRONMENTAL SERVICES
 610 D STREET
 P.O. BOX 8337
 SO. CHARLESTON, WV 25303
 PHONE: 304-744-9864
 FAX: 304-744-7866

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DEC 19 2018

WV Department of Environmental Protection

REPORT TO: Client Name: HG Energy
 Address: _____
 City/State/Zip: _____
 Contact Person: _____
 Telephone Number: _____ Fax No. _____
 Email Address: _____
 Sampler Name: (Print) Bernie Williams
 Sampler Signature: _____
 Project Name: Nutton 1208 Pad
 Special Reporting: Email Results Fax Results

BILL TO: Client Name: _____
 Address: _____
 City/State/Zip: _____
 Contact Person: _____
 Telephone Number: _____ Fax No. _____
 Email Address: _____
 Purchase Order #: _____
 TURN AROUND TIME: _____ Standard
 _____ RUSH (pre-scheduled; surcharges may apply) Please Check One

1 DAY 2 DAY 3 DAY

Date Needed

033-5
 4
 8

Sample ID / Description	COMPOSITE SAMPLE				GRAB SAMPLE		PRESERVATIVE				MATRIX				ANALYZE FOR:				# of Bottles	Flow (gpm, cfm, mgd) circle one	Field pH	Field Conductivity	Field DO	Field Chlorine (mg/L or ug/L) circle one	Field Temp (F or C) circle one		
	START DATE	START TIME	END DATE	END TIME	DATE	TIME	Ice	OTHER	HCl	HNO3	H2SO4, Plastic	H2SO4, Glass	None	None	Groundwater	Wastewater	Drinking Water	Surface								Soil	Other (specify)
Williams Thomaschar 39 09 23.81					11-29-18	1115	✓															3	7.3	480			21.5
80 25 28.03 Williams Broadwater 39 09 24.84					"	1125	✓															3	7.8	420			24.8
80 25 31.97 1 Truck 2 Hours on 1 Well																											

Comments: _____

Records retained for 5 years

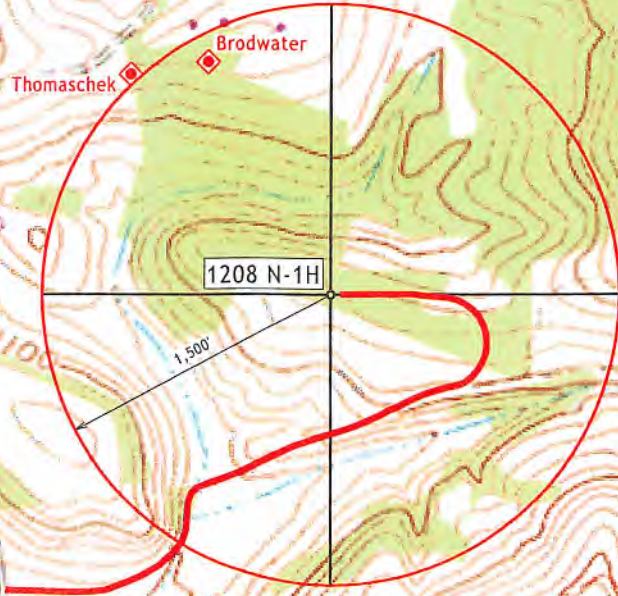
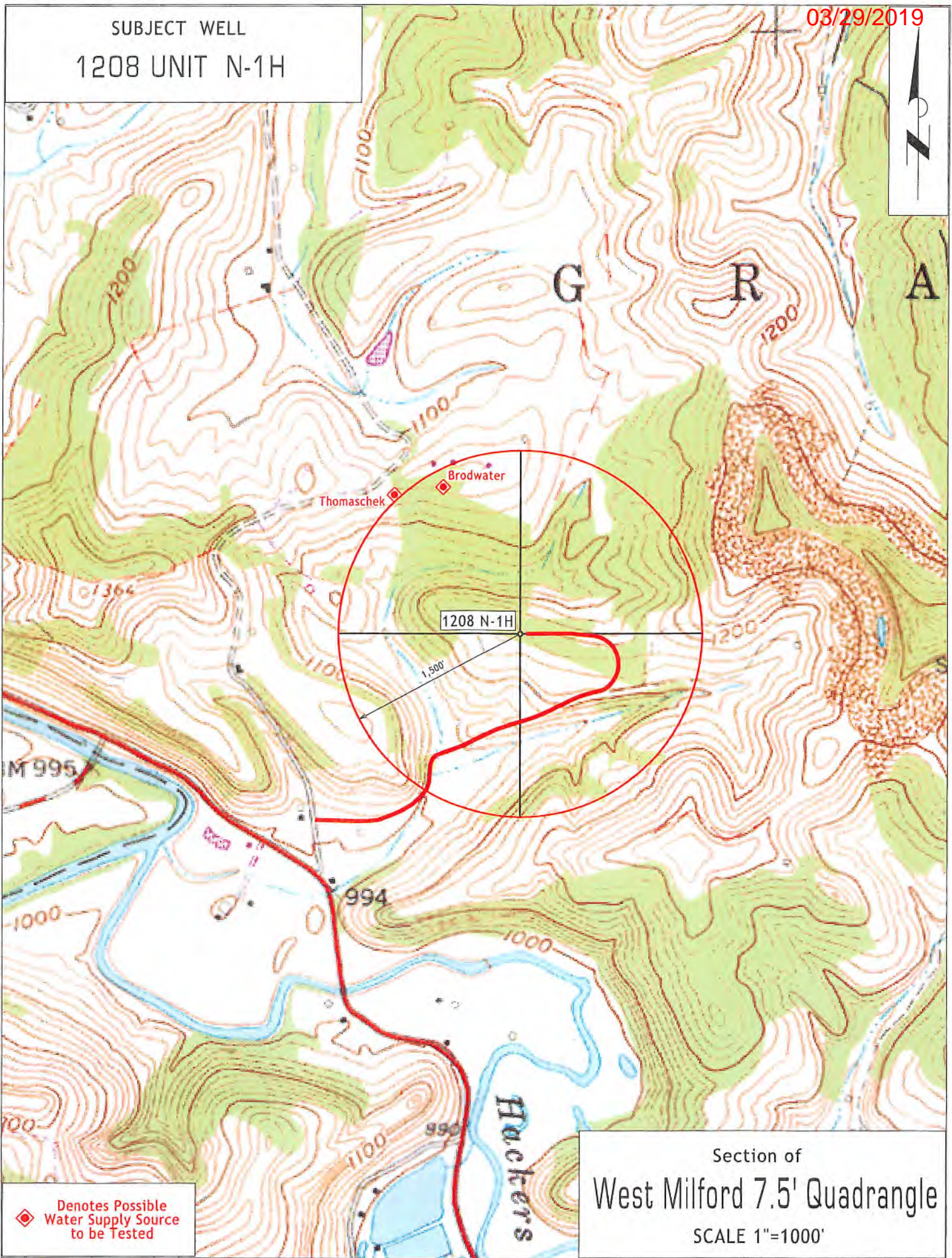
Relinquished by: <u>Kenneth</u>	Date: <u>11-29-18</u>	Time: <u>12:32</u>	Received by: <u>K. Kachel</u>	Date: <u>11/29/18</u>	Time: <u>12:32</u>
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____

Laboratory Comments:
 Temperature Upon Receipt: _____
 Bottles Preserved? 56

Collector # _____

03/29/2019

SUBJECT WELL
1208 UNIT N-1H



1208 N-1H

GR A

Hackers

◆ Denotes Possible Water Supply Source to be Tested

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

0460-000

WW-6A3
(1/12)

Operator Well No. Nutter 1208 N-1H

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

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

Date of Notice: 11/15/18 **Date of Planned Entry:** 11/25/18

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s)

Name: 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

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: _____

Address: _____

MINERAL OWNER(s)

Name: **See Attached List**

Address: _____

*please attach additional forms if necessary

Notice is hereby given:

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

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.153300, -80.424351</u>
County: <u>Harrison</u>	Public Road Access: <u>SR 19</u>
District: <u>Grant</u>	Watershed: <u>Middle West Fork Creek</u>
Quadrangle: <u>West Milford, WV 7.5'</u>	Generally used farm name: <u>Nutter</u>

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

Notice is hereby given by:

Well Operator: HG Energy II Appalachia, LLC

Telephone: 304-420-1119

Email: dwhite@hgenergyllc.com Diane White

Address: 5260 Dupont Road
Parkersburg, WV 26101

Facsimile: 304-863-3172

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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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Page 1 Continued

Mineral Owners

Amber McWhorter Ortoll
109 Ocean Cay Way HY
Poluxo, FL 33462-5493

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

Anna L Lukasko Trust
783 Peregrine Pl
Amherst, OH 44001-2636

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

Argyle F Shingleton
202 Emerson Rd
Clarksburg, WV 26301

Barbara J Richard
1320 San Rafael Drive
Petaluma, CA 94954

Barbara June Richard
1320 San Rafael Drive
Petaluma, CA 94952

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

Bonnie L Prasifka
1107 Canterbury Drive
Columbia, MO 65203

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

Carlton David Lloyd
516 Semillon Lane
Moore, SC 29369-8523

Carolyn E Wood Kaesen
13 Princeton Place
Hagerstown, MD 21742

Charles Henry Burnside
867 MIDDLETOWN RD
Shinnston, WV 26431

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Mineral Owners

Charles Maxwell
72 Selby Road
Morgantown, WV 26508

Cheryl L Goldsmith
4770 Stoney Bridge Rd.
Millville, NY 11747

Chester Lee Burnside
136 REDSTONE CHURCH RD
Fayette City, PA 15438

Christine Rae Hall
117 South ST
Bluffton, SC 29910

Christine Rae Totten
117 South ST
Bluffton, SC 29910

Daphne Lynne McWhorter
279 Shadyside Ave
Lakewood, NY 14750

David L Favot
112 Creek Way
Santa Rosa, CA 95403

David Maxwell Gray
732 E. Park Ave.
Charlotte, NC 28203

Deborah Bell Meyer
109 Palm Forest Pl
Ponte Verda, FL 32082

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

Dennis Keith Bumgardner
10527 Harwood Lane
Charlotte, NC 28214-9620

Dominion Energy Transmission, Inc
445 West Main Street St
Clarksburg, WV 26301

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

Donna Frumento
2341 Mapleleaf Dr
Vista, CA 92081

Elaine Sue Dixon
1848 Green Ave
Clarksburg, WV 26301

Elizabeth A Beveridge
243 Shady Lane
Alma, WV 26320

Elizabeth Post
149 Wagon Wheel Rd
Jane Lew, WV 26378

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

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Mineral Owners

Floyd J Burnside
187 Dyke St
Big Sandy, TN 38221

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

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

Gary Williamson
9022 N E 8TH Ave Unit T3
Miami Shores, FL 33138

George Ann Keener
4785 Arlington Dr
Sykesville, MD 21784

Gore Corporation
PO Drawer 2101
Clarksburg, WV 26301

Gregory Scott Mcwhorter
7922 N 31 St
OMAHA, NE 68112

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

Hiram Gene Burnside
PO Box 8044
Nutter Fort, WV 26302

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

Hylan Calcerano
1520 N Franklin Blvd
Pleasantville, NJ 08232

I L Morris
PO Box 397
Glennville, WV 26351-0880

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

Jack Lynn Butts
4554 Fairview Dr
Berkeley Springs, WV 25411

Jackson Lodge No 35 AF & AM
PO Box 391
Lost Creek, WV 26385

Jacob Post
1419 Hawk Hwy
Lost Creek, WV 26385

James A Edwards
1115 Virginia Ave
Fairmont, WV 26554

James A Harper Testamentary Trust
PO Box 41779
Austin, TX 78704

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Mineral Owners

James R. Burnside
 PO Box 392
 West Milford, WV 26451

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

James Y Hornor & Jean S Hornor (JTWROS)
 5002 Esmond Lane
 Castle Rock, CO 80108-9027

Jane M Hardin
 225 Watchung FRK
 Westfield, NJ 07090

Jane R Gray & Terry Dean Koubek
 410 Monaco Dr
 Indialantic, FL 32903-4002

Jane Rae White, Agent
 2447 Merrigan Place
 Tallahassee, FL 32308

Janet Sue Butts
 507 Forest Glen Drive
 Moorefield, WV 26836

Jason A & Jennifer E Post
 675 Isaacs Creek Rd
 Lost Creek, W 26385

Jean Ann Griffin
 2665 Misty Morning Lane
 Roswell, GA 30076

Jeanne Jones Beck or her heirs or assigns
 129 W 5th St
 Russell, KS 67665-2716

Jennings E. Goldsmith, Jr.
 117 Cloverdale Estates, Lot 3
 St. Marys, WV 26170-8748

Jessica Schrage
 511 Heritage Dr
 Sparta, KY 41086

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

John Britton Edwards II
 1809 Garden Drive
 Virginia Beach, Virginia 23454

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

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

John J Calcerano
 81 North Maple Ave
 Tuckerton, New Jersey 08087

John Timothy Burns
 15 Della Lane
 Boonesboro, MD 21713

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Mineral Owners

John W Lukasko
2A Fox Run Road
Norwalk, OH 44857

Joseph L Maxwell
3033 Gregory's Run
Clarksburg, WV 26301

JP Morgan Chase Bank, Trustee
Agreement dated November 21, 1958,
by SA Smith & C Burke Morris
2200 Ross Ave
Dallas, TX 75201

Karen M Henderson
190 Sapphire Lane
Meadowbrook, WV 26404

Kathleen Favot-Blanquie
931 I Street
Petaluma, CA 94952

Kenneth Burnside
201 Maple View Dr
Clarksburg, WV 26301

Kenneth Burnside
203 Locust View Drive
Clarksburg, WV 26301

Kenneth Scott Hall
127 South Street
Bluffton, SC 29910

Kevin McNemar
PO Box 534
Lumberport, WV 26385

Kimberlee K Holland
204 Ray Hudkins Rd
Pennsboro, WV 26415

Krystal Ruth Harris
4850 Park Manor Apt 4313
Shelby Township, MI 48316-2265

Larry J Olinger
28561 Revere Ave
Warren, MI 48092-2410

Lester W Burnside Jr
32 Garden Circle
Bridgeport, WV 26330

Linda Grimes
1688 Jakes Run Rd
Lost Creek, WV 26385

Linda M Keith
3445 State Route 20
Collins, OH 44826

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

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

Lisa K Painter
301 Devonshire CT
Cranberry Twp, PA 16066

WW-6A31208 N-1H(1-12)Page 1 ContinuedMineral Owners

Marjorie Kay Clark
229 Prado Way
Berkeley Springs, WV 25411

Mark S Favot
931 "I" Street
Petaluma, CA 94952

Mark Stephen Favot
931 "I" Street
Petaluma, CA 94952

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

Mary Ann Wood
7505 Sawgrass Terrace
Montgomery Village, MD 20886

Mary E Favot c/o Barbara Richard
1320 San Rafael Drive
Petaluma, CA 94954

Mary Elusiia Favot
PO Box 4686
Petaluma, CA 95452

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

Mary Jane Lewis
146 E Main St
Clarksburg, WV 26301

Mary V Gray Trust 1983
c/o David M Gray
732 East Park Ave
Charlotte, NC 28203

Maxine J Gamble & David L Gamble
2016 Baldwin Rd
Reynoldsburg, OH 43068-3695

Melissa Butts Wright
412 Rolling Acres
Droid Field, WV 26845

Michael K Burnside
PO BOX 36
Kingwood, WV 26537

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

Mike Ross Inc
PO Box 880
Glennville, WV 26351-0880

Mike Ross Inc
PO Box 219
Coalton, WV 26257

Mona L Anderson
181 Shore Drive
Laconia, NH 03246

Nancy S Kucharik
P.O Box 5353
Toledo, OH 43611

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Page 1 Continued

Mineral Owners

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

Nina Blondell Cutright
42 Anthony Ave
Clarksburg, WV 26301-7366

Page Harmer Thomas
714 Shamrock Ln
Charleston, SC 29412

Page Harmer Thomas & John David
714 Shamrock Ln
Charleston, SC 29412

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

Patricia A Mealey
5240 Fawn Dr
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

Pauline A Grogan
783 Peregrine Place
Amherst, OH 44001

Perry Lee Post
397 Isaacs Creek Rd
Lost Creek, WV 26385

Piala Living Trust
c/o Vanessa Jo Piala
4811 Cumberland Ave
Chevy Chase, MD 20815

Post Heritage LLC
1407 Davisson Run Rd
Clarksburg, WV 26301

Richard L Thompson
1609 Churchill Downs Dr
Waxhaw, NC 28273

Robby Limpo
1883 Caldwell Rd
Samson, AL 36477

Robert A Lukasko
2828 West River Road South
Elyria, OH 44035

Robert J & Amanda Jo Hitt
4165 Jesse Run Road
Jane Lew, WV 26378

Robert Nimorwic
406 Hearth Terrace
Argyle, TX 76226

Roberta Smiley
2 Smiley Dr
Mechanicsburg, PA 17050

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Mineral Owners

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

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

Scott P Burnside
2775 Anmoore Rd.
Bridgeport, WV 26330

Security National Trust Company
Successor Trustee, Lillie Blanch Smith
Testamentary Trust Agreement
907 Third Ave, Suite 220
Huntington, WV 25701

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

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

Steven L Maxwell
102 Scenery Drive
Morgantown, WV 26508

Susan Brown Yunker
3668 Toland Ave
Los Alamitos, CA 90720-2256

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

Teresa A Coyle
50 Brampton Street
Galloway, New Jersey 08205

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

Tygart Resources Inc
PO Box 6135
Pittsburgh, PA 15212

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

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

William A Burnside
5943 Jarvisville Rd
Salem, WV 26426

William E Wagner
513 Vantage Drive
Morgantown, WV 26508

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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: 11/26/2018 **Date Permit Application Filed:** 12/05/2018

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 UTM NAD 83 Easting: 549738.9
County: Harrison Northing: 4333946.4
District: Grant Public Road Access: SR 19
Quadrangle: West Milford WV 7.5' Generally used farm name: Nutter
Watershed: Middle West Fork Creek

This Notice Shall Include:

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

Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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

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Operator Well No. 033-5940 ^{Number 1203 N 112} **03/29/2019**

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: 11/27/2018 **Date Permit Application Filed:** 12/05/2018

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

CERTIFIED MAIL HAND
RETURN RECEIPT REQUESTED DELIVERY

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

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

Name: 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(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>549738.9</u>
County: <u>Harrison</u>		Northing: <u>4333946.4</u>
District: <u>Grant</u>	Public Road Access: <u>SR 19</u>	
Quadrangle: <u>West Milford 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 *Diane White*

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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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

December 17, 2018 ✓

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-1H 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,

A handwritten signature in blue ink that reads "Gary K. Clayton".

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

RECEIVED
Office of Oil and Gas

DEC 19 2018

WV Department
Environmental Protection

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

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	

RECEIVED
Office of Oil and Gas

DEC 19 2018

WV Department of
Environmental Protection

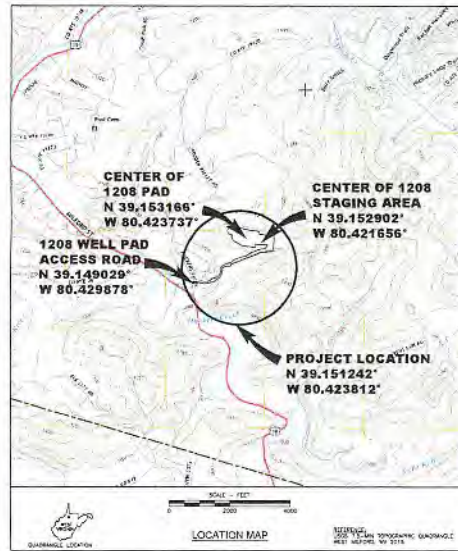
CONSTRUCTION IMPROVEMENT PLANS WITH EROSION AND SEDIMENT CONTROLS HG 1208 WELL PAD

**APPROVED
WVDEP OOG**
7/22 1/28/2019

GRANT DISTRICT
HARRISON COUNTY
WEST VIRGINIA

CONSTRUCTION SEQUENCE

1. Prior to commencement of any earth disturbance activity including clearing and grubbing, the registrant shall call West Virginia 811 by dialing 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 areas 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.
2. 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.
3. 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.
4. Land Clearing and Grading - Implement clearing and grading only after all downslope E&S BMPs have been constructed and stabilized.
5. 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.
6. 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.
7. Upon completion of pad grading, compact the pad to grade and begin placement of pad soil cement.
8. 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.



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

Estimated Gross Material Balance (CY)			
Final Development - Original Station	CY		
	Cut	Fill	Stockpile
Total Well Pad & Staging Area	60,592	10,573	4,961
Access Road	8,026	3,664	2,031
Total	68,618	14,237	6,992
Soil Requirement for Aggregate In-situ			8,692
Total Site Balance			2,005 Cut
Proposed Topsoil (Level of Disturbance)			16,000
Imp. Soil Material (10%)			2,617
Est. Topsoil Stockpile Volume (Level of Disturbance)			21,782
Minimum Total Stockpile Capacity Required (CY)			24,337

Notes:
1. Material balance for soil, gross earthwork quantities only.
2. Topsoil cut volume based on 6 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 day volumes.

Estimated Gravel Quantities			
	20# Crushed Stone (CY)	40# Crushed Stone (CY)	Total (CY)
Soil Sub-Cement (Phase 2)	30,111	14,147	44,258
2" Open 3/4" Crusher Run (Inert)	9,262	1,533	10,795
Top Dress Chd & Snd (Inert)	-	-	9,872
Total	39,373	15,680	55,053

Estimated Total Disturbance Area Length (LF)	
Access Road	6,160
Well Pad	2,534
Staging Area	3,006
Disturbance Area	20,400
Estimated Access Road Length of Disturbance (Meters)	7,021
Estimated Well Pad and Staging Area Length of Disturbance (Meters)	15,379
Well Pad and Staging Area Peak Pre-Construction Flowrate (GPM)	1,162.0

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 39.153376	W 80.424324
N-5H	N 39.153410	W 80.424310
N-4H	N 39.153459	W 80.424296
S-7H	N 39.153074	W 80.423284
S-6H	N 39.153114	W 80.423270
S-8H	N 39.153154	W 80.423256
S-9H	N 39.153193	W 80.423242
S-10H	N 39.153233	W 80.423228

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

RECORD OWNER	RECORD LOT #	RECORD AREA OF LOT	AREA (WELL-PAD, LDD)
MUTTER USA W	17-12-0445-0009-0000	105.50 AC	2.164 AC
FELDT CAROL (LE) MUTTER USA W	17-12-0445-0001-0000	87.78 AC	4.136 AC
MUTTER USA W	17-12-0445-0010-0000	86.87 AC	4.187 AC
BROADWATER WILLIAM M II & LINDA L	17-12-0445-0031-0000	247.84 AC	11.933 AC
TOTAL LIMIT OF DISTURBANCE			22.420 AC

WEST VIRGINIA 811

CALL BEFORE YOU DIG!

Dial 811 or
800.245.4848
www.811wv.com

1. SERVICE UTILITY LINES ARE NOT SHOWN ON THIS PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, IDENTIFYING AND MARKING ANY UTILITY LINES TO BE AVOIDED OR DELETED.

THE REGISTRANT IS CERTAINLY RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS PLAN. THE REGISTRANT SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS PLAN. THE REGISTRANT SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS PLAN.

REVISION	DATE	DESCRIPTION
1	1/22/19	REVISIONS PER DEP COMMENTS



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

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

APPROVED WEP 11/06/2018
CHECKED WEP 10/29/2018
DRAWN CDR 10/28/2018
PROJECT No. 4000-94807778
DRAWING NUMBER
PA007778-001
SHEET 1

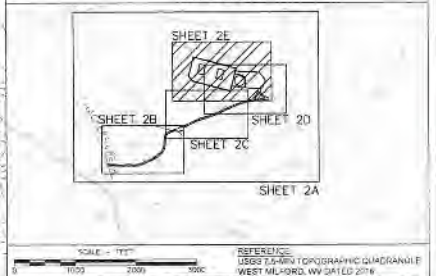
Penn E&R
Environmental & Remediation, Inc.
111 RYAN COURT, PITTSBURGH, PA 15205
412-722-1222

APPROVED
WV DEP OOG

8-01 1/28/2019

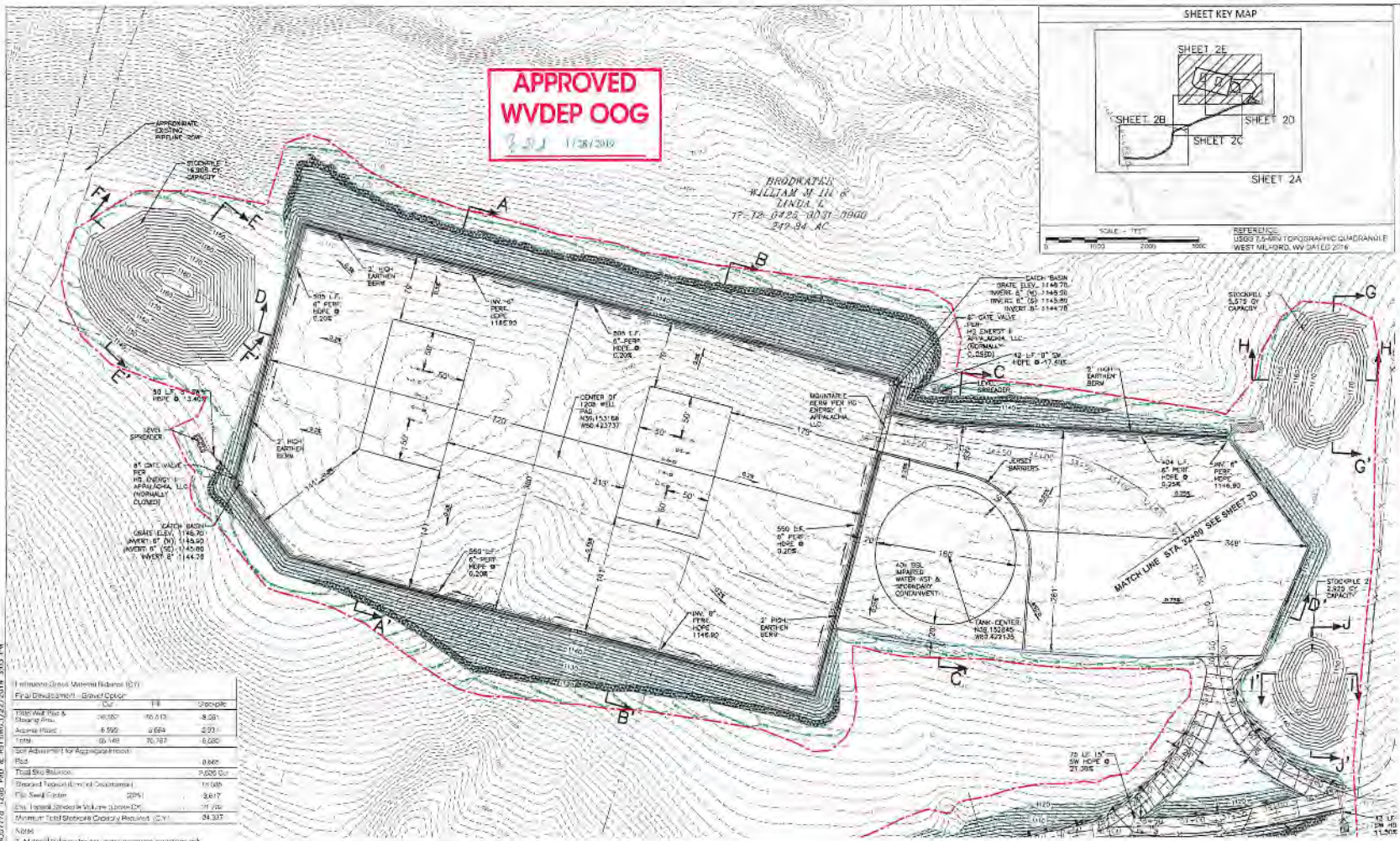
PRODUCED BY
WILLIAM M III &
LINDA L
77-12-0422-0031-0000
247.34 AC

SHEET KEY MAP



LEGEND

- 800 GPD CATCH BASIN
- 2" HIGH EARTH BURN
- 3" HIGH EARTH BURN
- 4" HIGH EARTH BURN
- 5" HIGH EARTH BURN
- 6" HIGH EARTH BURN
- 8" HIGH EARTH BURN
- 12" HIGH EARTH BURN
- 18" HIGH EARTH BURN
- 24" HIGH EARTH BURN
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- 60" HIGH EARTH BURN
- 66" HIGH EARTH BURN
- 72" HIGH EARTH BURN
- 78" HIGH EARTH BURN
- 84" HIGH EARTH BURN
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- 582" HIGH EARTH BURN
- 588" HIGH EARTH BURN
- 594" HIGH EARTH BURN
-



NOT FROM FINANCING PLAN

APPROVED FOR THE DEVELOPMENT OF THIS SITE...

1. THE DEVELOPER SHALL MAINTAIN THE EXISTING TOPOGRAPHY...
2. THE DEVELOPER SHALL MAINTAIN THE EXISTING TOPOGRAPHY...
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1) Materials Stock Material Volume (CY)

Final Development - Gravel Color

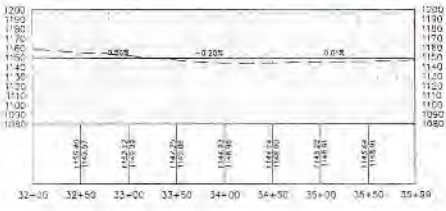
Item	Unit	Quantity	Unit Price	Total
Gravel (10000)	CY	86.373	8.381	724.12
Gravel (4000)	CY	2.273	8.381	19.04
Gravel (2000)	CY	70.787	5.626	398.14
Subtotal				1141.30
Final Development - Gravel Color				
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2) Material Storage Pad (CY)

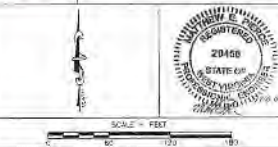
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REVISION	DATE	DESCRIPTION
1	7/21/19	REVISED PER DEP COMMENTS



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

PREPARED FOR:
HG ENERGY II APALACHIA, LLC
PARKERSBURG, WEST VIRGINIA

APPROVED: SEP 17, 2019
DRAWN: SEP 17, 2019
CHECKED: SEP 17, 2019
PROJECT NO: 1602-0007778

Penn E&R
Environmental Remediation, Inc.
311 RIVER COURT, PITTSBURGH, PA 15201
412-771-1222

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

WEST VIRGINIA **YOU DIG!** Dial 811 or 800.245.4848

APPROVED: SEP 17, 2019
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