



west virginia department of environmental protection

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

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

Tuesday, September 24, 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 S-6H
47-033-05959-00-00

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 S-6H
Farm Name: LINDA & WILLIAM W. BROE
U.S. WELL NUMBER: 47-033-05959-00-00
Horizontal 6A New Drill
Date Issued: 9/24/2019

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

<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 S-6H 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: 1147'

5) Well Type (a) Gas Oil Underground Storage
Other _____
(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 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: 23,018'

11) Proposed Horizontal Leg Length: 15,086'

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: _____

SDW Per email

WW-6B
(04/15)

API NO. 47- 033 05959mod

OPERATOR WELL NO. Nutter 1208 S-6H

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/Coal	20"	NEW	J-55	94	1000'	650' 1000'	CTS
Intermediate 1	13 3/8"	NEW	J-55	68	1900'	1900'	CTS
Intermediate 2	9 5/8"	NEW	J-55	40	2700'	2700'	CTS
Production	5 1/2"	NEW	P-110	23	23018'	23018'	CTS
Tubing							
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	30"	.500				Drilled In
Fresh Water	20"	26"	.438	2110	1200	Type 1, Class A	40 % excess yield = 1.20, CTS
Coal/Storage	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	Lead 40% excess, Tail 0% excess
Intermediate	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	Lead 40% excess, Tail 0% Excess
Production	5 1/2"	8 1/2"	.415	16240	12000	Type 1/Class A	20% excess yield = 1.19, tail yield: 1.19
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 7050 feet. Drill horizontal leg to estimated 15,086 lateral length, 23,018 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 - Blow Spring on every joint, well also be running ECP for isolating storage zone
Intermediate - Blow 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 5.6" 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 - 15.5 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 PQ2/PNE-1 + 0.3% bwoc Rd + 1% bwoc EC1 + 0.75 gal/tk FP13L + 0.3% bwoc MPA170. Tail: 14.8 ppg PNE-1 + 0.35% bwoc Rd + 0.75 gal/tk 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 bottom 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.



1208 S-6H
Marcellus Shale Horizontal
Harrison County, WV

				1208 S-6H SHL				14218890.09N 1803908.48E		
Ground Elevation		1147'		1208 S-6H LP				14217942.9N 1802213.65E		
Azimuth		159.798°		1208 S-6H BHL				14203005.24N 1807710.33E		
WELLSBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
	30"	30" 157.5# LS	Conductor	0	120	AIR	N/A, Casing to be drilled in w/ Dual Rotary Rig	N/A	Ensure the hole is clean at TD.	Conductor casing = 0.5" wall thickness
	26"	20" 94# J-55	Fresh Water	0	135, 500	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
			Kitaning Coal	810	815					
			Coal/Fresh Water Protection	0	1000					
	17.5"	13-3/8" 68# J-55 BTC	Little/Big Lime	1276 / 1317	1301 / 1393	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 ACP for isolating storage zone*</i>	Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.480" wall thickness Burst=3450 psi
			Injun / Ganiz (Storage)	1393 / 1680	1499 / 1740					
			Intermediate 1	0	1900					
			Fifty / Thirty Foot	1800 / 1880	1847 / 1892					
	12.25"	9-5/8" 40# J-55 BTC	Gordon Stray / Gordon	1935 / 2000	2000 / 2090	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
			5th Sand	2185	2220					
			Bayard Sand	2275	2310					
			Intermediate 2	0	2700					
	8.5" Vertical	5-1/2" 23# P-110 HP CDC HTQ	Speechley	2895	2913	AIR / 9.0ppg SOBMs	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=16240 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					
			Cashaqua	6290	6491					
			Middlesex	6491	6571					
			West River	6571	6664					
Burkett			6664	6690						
Tully Limestone			6690	6794						
Hamilton	6794	7013								
8.5" Curve	5-1/2" 23# P-110 HP CDC HTQ	TMD / TVD (Production)	23018	7050	11.5ppg-12.5ppg SOBMs		Run 1 spiral centralizer every 3 joints from the 1st 5.5' long joint to the top of the curve.			
		Marcellus	7013	7064						
		Onondaga	7064							
8.5" Lateral	5-1/2" 23# P-110 HP CDC HTQ	TMD / TVD (Production)	23018	7050	11.5ppg-12.5ppg SOBMs					

LP @ 7050' TVD / 7932' MD

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

+/-15086' ft Lateral

TD @ +/-7050' TVD
+/-23018' MD

X=centralizers

33-059159.mxd

Adkins, Laura L

33-05959

From: Ward, Samuel D
Sent: Thursday, August 29, 2019 4:25 PM
To: Adkins, Laura L
Subject: HG 1208 Mods

Laura,

Per our discussion earlier today, I am okay with the fresh water casing modification to 1,000'.

Sam

Get [Outlook for iOS](#)

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

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

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33-05959

PROPOSAL TO DRILL WITHIN DOMINION TRANSMISSION STORAGE FIELD

FIELD/ZONES: **DOMINION FINK/KENNEDY/LOST CREEK - GANTZ SAND**

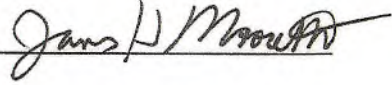
WELL NAME: **Nutter 1208 S-6H**

Well # **Nutter 1208 S-6H**

DISTRICT/COUNTY/STATE: **Union, Harrison, WV**

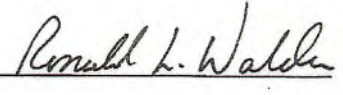
Submitted 
JOSH HINTON
HG ENERGY, LLC

DATE 7-1-19

Approved 

DATE 7-9-19

Dominion Energy Transmission

Approved 

DATE 7-9-19

Dominion Energy Transmission

Comments:

HG Energy has submitted this Casing & Cementing diagram and Drilling Plan to Dominion Transmission for Review. This signed document acknowledges that Dominion has reviewed the proposed casing program and the well's location within the Fink/Kennedy/Lost Creek storage field. This acknowledgement also confirms the proposed casing program is accurate to the proper storage zone as provided by HG Energy, LLC

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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 S-6H 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: 1147'
- 5) Well Type (a) Gas Oil Underground Storage
Other
(b) If Gas Shallow Deep
Horizontal
- 6) Existing Pad: Yes or No No
- 7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 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: 23,018'
- 11) Proposed Horizontal Leg Length: 15,086'
- 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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18) **CASING AND TUBING PROGRAM**

<u>TYPE</u>	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft./CTS)</u>
Conductor	30"	New	LS	157.5	120'	120' ✓	Drilled In
Fresh Water	20"	NEW	J-55	94	650'	650' ✓	CTS
Coal/Storage	13 3/8"	NEW	J-55	68	1900'	1900' ✓	CTS
Intermediate	9 5/8"	NEW	J-55	40	2700'	2700'	CTS
Production	5 1/2"	NEW	P-110	23	23018'	23018'	CTS
Tubing							
Liners							

<u>TYPE</u>	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	30"	30"	.500				Drilled In
Fresh Water	20"	26"	.438	2110	1200	Type 1, Class A	40% excess yield = 1.20, CTS
Coal/Storage	13 3/8"	17 1/2"	.480	3450 ✓		Type 1/Class A	Lead 40% excess, Tail 0% excess
Intermediate	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	Lead 40% excess, Tail 0% excess
Production	5 1/2"	8 1/2"	.415	16240	12000	Type 1/Class A	20% excess yield = 1.18, tail yield 1.20
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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 Environmental Protection

33-05959

Ground Elevation		1147'		1208 S-6H SHL		1208 S-6H LP		1208 S-6H BHL		14218890.09N 1803908.48E		14217942.9N 1802213.65E		14203005.24N 1807710.33E			
AZITH		159.798°		GEOLOGY		TOP		BASE		CEMENT		CENTRALIZERS		CONDITIONING		COMMENTS	
WELLBORE DIAGRAM		CASING		HOLE		Casing		MUD		MUD		MUD		MUD		MUD	
X	X	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			
X	X	20" 94# J-55	Fresh Water Protection	0	135, 500	AIR	16.6 ppg PNE-1 + 3% lwt 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 = 0.439" wall thickness Burst=2110 psi			
X	X	13-3/8" 68# J-55 BTC	Water/Coal Protection	0	650		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>well also do running ACP for isolating storage zone</i>	Once casing is at setting depth, circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.480" wall thickness Burst=3450 psi			
X	X	9-5/8" 40# J-55 BTC	Fill / Thirty Foot Gordon Stay / Gordon	1800 / 1800	1047 / 1802	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=3550 psi			
X	X	5-1/2" 23# P-110 HP CDC-HTQ	Speechby	2885	2913	AIR / 9.0ppg SOB	Lead: 14.5 ppg POZ/PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 galkak FP13L + 0.3% bwoc MPA170 Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 galkak 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 VTD 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 = 0.418" wall thickness Burst=16240 psi Note: Actual centralizer schedule may be changed due to hole conditions			
X	X	8.5" Curve	Middlesex	6481	6571	11.5ppg SOB						Run 1 spiral centralizer every 3 joints from the 1st 5.5' long joint to the top of the curve.					
X	X	8.5" Lateral	West River	6571	6684	12.5ppg SOB											
X	X		Burkett	6684	6980	11.5ppg SOB											
X	X		Tully Limestone	6980	6784	11.5ppg SOB											
X	X		Hamilton	6784	7013	11.5ppg SOB											
X	X		Marcellus	7013	7084	11.5ppg SOB											
X	X		TRD / TVD (Production)	23018	7080	11.5ppg SOB											
X	X		Onondaga	7084	7084	11.5ppg SOB											

1-6N 6L = 1145'

13" SET 160' below base
or 5 for sec.
60' +/- Interval = 60'
sub sec = -5.53

TD @ +7050' TVD
+23018' MD

4-15000' fl Lateral

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

LP @ 7050' TVD / 7692' MD

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Office of Oil and Gas
JUL 12 2019
WV Department of
Environmental Protection



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

AOR

4703305959

June 24, 2019

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 and S-6H to S-10)
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.

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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

Enclosure

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Environmental Protection



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

June 24, 2019

Abarta Oil & Gas Company
200 Alpha Drive
Pittsburg, PA 15238

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

June 24, 2019

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

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

June 24, 2019

Alliance Petroleum Company
101 McQuiston Drive
Jackson Center, PA 16133

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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

June 24, 2019

R & R Oil & Gas Company
7147 Hackers Creek Road
Buckhannon, WV 26201

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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

June 24, 2019

Enervest Operating Company
300 Capital Street, Suite 200
Charleston, WV 25304

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

June 24, 2019

Glass Source Inc. dba Masterpiece Crystal
PO Box 848
Jane Lew, WV 26378

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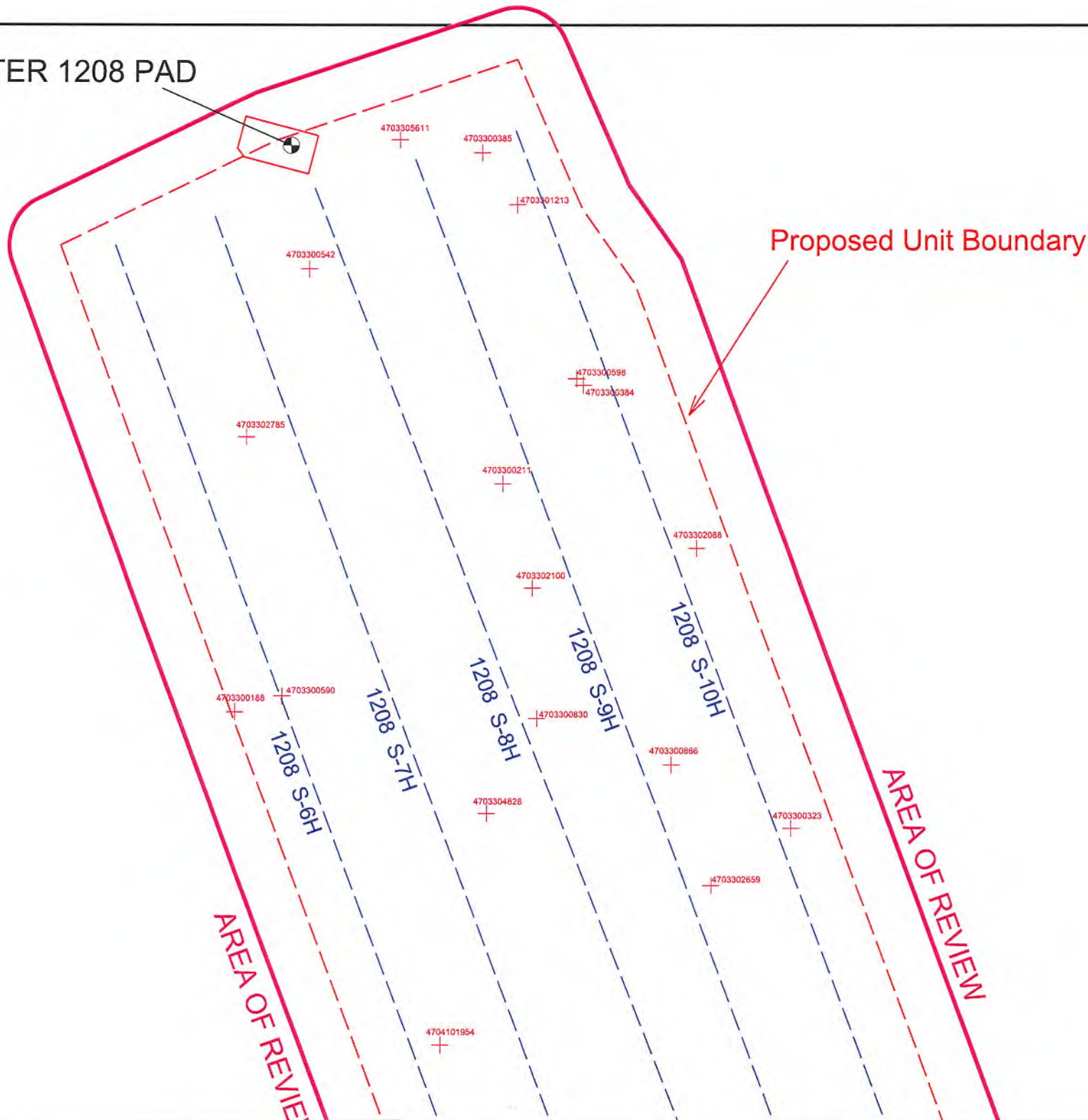
Sincerely,

Diane White

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NUTTER 1208 PAD



Proposed Unit Boundary



AREA OF REVIEW

AREA OF REVIEW

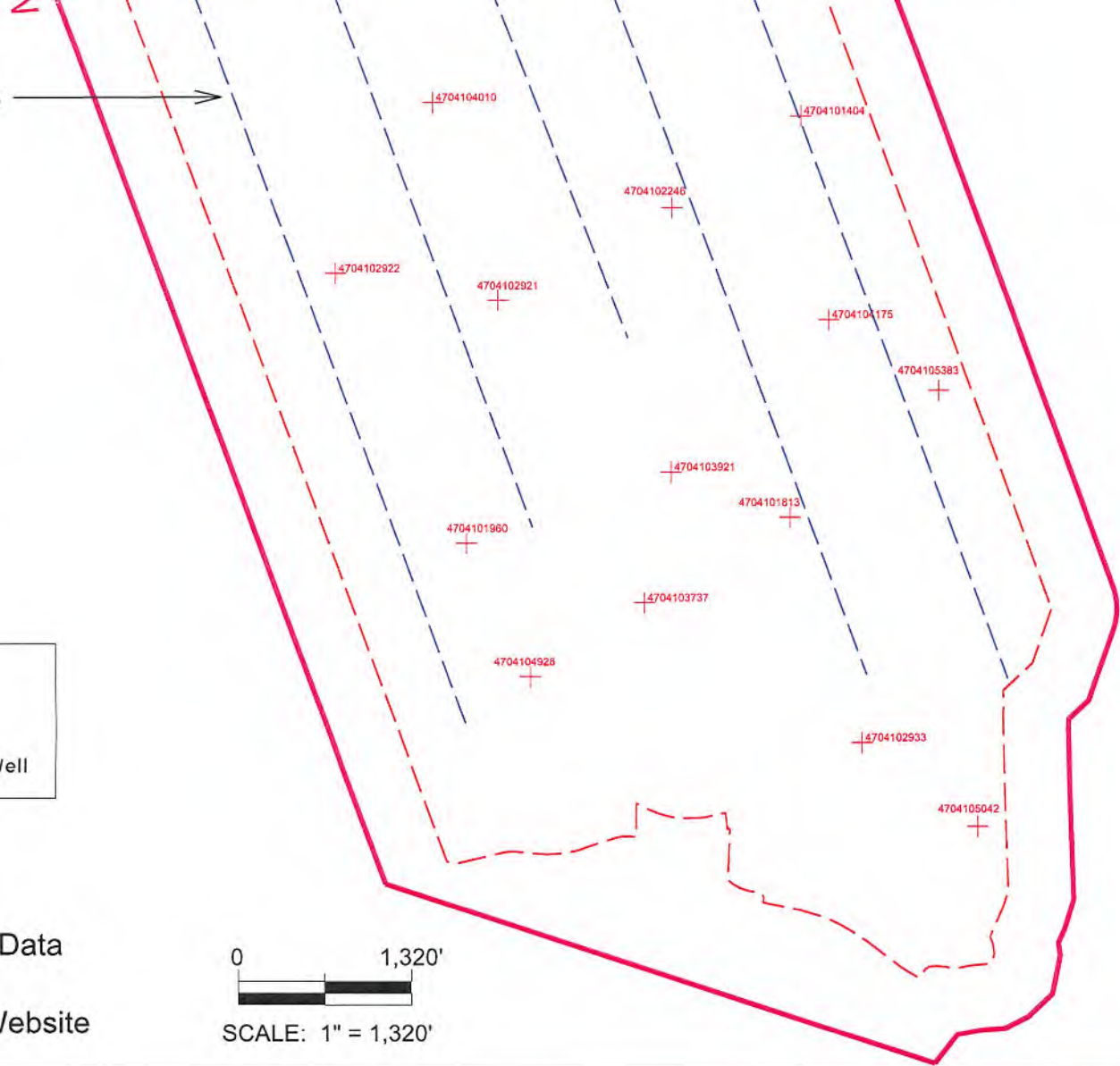
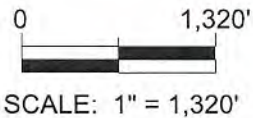
Proposed Wellbores →

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Well Key

-  Conventional Vertical Well
-  Proposed Horizontal Marcellus Well

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



Area of Review for:

NUTTER 1208 UNIT

- Proposed 1208 S-6H Proposed 1208 S-7H
- Proposed 1208 S-8H Proposed 1208 S-9H
- Proposed 1208 S-10H

Grant District, Harrison County, W.Va.
Hackers Creek District, Lewis County, W.Va.

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



6/17/2019

EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:

NUTTER 1208 SOUTH UNIT AND PROPOSED WELLS S-6H, S-7H, S-8H, S-9H & S-10H

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4703300188	Harrison	H Neeley	Dominion Energy Transmission, Inc.	Gordon Stray	Storage	1928	Active	39.138239	-80.42509
2	4703300211	Harrison	H H Smith	Dominion Energy Transmission, Inc.	Gordon	Storage	2064	Active	39.143537	-80.416852
3	4703300323	Harrison	J W Jackson	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	3457	Plugged	39.135017	-80.406567
4	4703300384	Harrison	J B Gusman 1	Dominion Energy Transmission, Inc.	Hampshire Grp	Gas	2386	Plugged	39.146875	-80.413572
5	4703300385	Harrison	Gusman	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	2337	Plugged	39.153261	-80.416667
6	4703300542	Harrison	Florence V Nutter	Dominion Energy Transmission, Inc.	Benson	Gas	4386	Active	39.149646	-80.422998
7	4703300590	Harrison	Howard Neely	Dominion Energy Transmission, Inc.	Benson	Gas	4280	Active	39.138311	-80.423561
8	4703300598	Harrison	J B Gusman	Dominion Energy Transmission, Inc.	Benson	Storage	4460	Active	39.146004	-80.413012
9	4703300830	Harrison	L A VanHorn	Dominion Energy Transmission, Inc.	Bayard	Gas	2272	Active	39.137961	-80.415098
10	4703300866	Harrison	Howard Neely CW114	Dominion Energy Transmission, Inc.	Fifty-foot	Storage	2150	Active	39.136716	-80.410589
11	4703301213	Harrison	Ricky Nutter	Dominion Energy Transmission, Inc.	Benson	Gas	4560	Active	39.151519	-80.414689
12	4703302088	Harrison	Archie L & Betty J Allman	Dominion Energy Transmission, Inc.	Benson	Gas	4800	Active	39.141505	-80.409657
13	4703302100	Harrison	W A Jackson	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Storage	4450	Active	39.140489	-80.415434
14	4703302659	Harrison	Siro Inc/White-Brooks 1	Abarta Oil & Gas Company	Benson	Gas	4554	Active	39.133523	-80.409285
15	4703302785	Harrison	George Garton et al	Dominion Energy Transmission, Inc.	Benson	Gas	4300	Active	39.144698	-80.425983
16	4703304828	Harrison	Joseph E Barron	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4266	Active	39.135870	-80.417267
17	4703305611	Harrison	Ricky Nutter	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4510	Active	39.153269	-80.419572
18	4704101404	Lewis	C H Stalnakier 1	Ross & Wharton Gas Company, Inc.	Benson	Gas	4300	Active	39.124468	-80.402142
19	4704101813	Lewis	Isaac Jackson	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4520	Active	39.116392	-80.403107
20	4704101954	Lewis	Isaac Jackson	Dominion Energy Transmission, Inc.	Benson	Gas	4280	Active	39.129161	-80.418886
21	4704101960	Lewis	Charles D Cole II	Dominion Energy Transmission, Inc.	Benson	Gas	4200	Active	39.115812	-80.411298
22	4704102246	Lewis	Christine White	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	3232	Active	39.122918	-80.405530
23	4704102921	Lewis	White	Alliance Petroleum Corporation	Benson	Gas	4292	Active	39.120791	-80.410070
24	4704102922	Lewis	C D Cole	Alliance Petroleum Corporation	Benson	Gas	2593	Abandoned	39.121208	-80.414691
25	4704102933	Lewis	A Bargerhoff	R&R Oil & Gas, LLC	Benson	Gas	4289	Active	39.111238	-80.400638
26	4704103737	Lewis	L.L. Moss	Enervest Operating, LLC	Brallier	Gas	5350	Active	39.114216	-80.406457
27	4704103921	Lewis	L.L. Moss	Enervest Operating, LLC	Benson	Gas	4259	Active	39.116972	-80.405714
28	4704104010	Lewis	William Watson	Enervest Operating, LLC	Greenland Gap Fm	Gas	4450	Plugged	39.124803	-80.412048
29	4704104175	Lewis	Mary Ester Helmick 2	Ross & Wharton Gas Company, Inc.	Greenland Gap Fm	Gas	4700	Active	39.120162	-80.401433
30	4704104928	Lewis	Glass Source Inc	Glass Source Inc, DBA Masterpiece Crystal	Misc Sands-BNSN/BRLLR	Gas	4220	Abandoned	39.112911	-80.409435
31	4704105042	Lewis	J Thomas Small	Ross & Wharton Gas Company, Inc.	Misc Sands-BNSN/BRLLR	Gas	4850	Active	39.109286	-80.397520
32	4704105383	Lewis	Christine White/W C White	Dominion Energy Transmission, Inc.	Brallier	Gas	4946	Active	39.118857	-80.398640

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WW-9
(4/16)

API Number 47 - 33 - 05959
Operator's Well No. Nutter 1208 S-6H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name HG Energy II Appalachia, LLC OP Code 494501907

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

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: NA

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

Proposed Disposal Method For Treated Pit Wastes:

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

*SDW
6/19/2019*

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

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

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

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

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

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

-Landfill or offsite name/permit number? See Attached

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

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

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

Company Official Signature *Diane White*

Company Official (Typed Name) Diane White

Company Official Title Agent

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Office of Oil and Gas

JUL 12 2019

WV Department of
Environmental Protection

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

[Signature] Notary Public

My commission expires 11/2/2021



HG Energy II Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 22.442 Prevegetation pH _____

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

Fertilizer type 10-20-20

Fertilizer amount _____ 500 lbs/acre

Mulch Hay _____ 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
<u>Tall Fescue</u>	<u>40</u>	<u>Tall Fescue</u>	<u>40</u>
<u>Ladino Clover</u>	<u>5</u>	<u>Ladino Clover</u>	<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: S. A. Warsett

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: 6/19/2019

Field Reviewed? Yes No

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Cuttings Disposal/Site Water

Cuttings - Haul off Company:

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

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

Environmental Coordination Services & Recycling (ECS&R)
8287 US Highway 19
Cochranon, PA 16814
814-425-7773

Disposal Locations:

Apex Environmental, LLC Permit # 06-08488
11 County Road 78
Amsterdam, OH 43908
740-548-4889

Westmoreland Waste, LLC Permit # 100277
111 Conner Lane
Belle Vernon, PA 15012
724-828-7884

Sycamore Landfill Inc. Permit #880-079001 05-2010
4301 Sycamore Ridge Road
Hurricane, WV 25526
304-562-2611

Max Environmental Technologies, Inc. Facility Permit # PAD004885146 / 301071
288 Max Lane
Yukon, PA 25968
724-722-3500

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

Waste Management Kelly Run Permit # 100668
1801 Park Side Drive
Elizabeth, PA 15037
412-884-7569

Waste Management South Hills (Arnot) Permit # 100592
3100 Hill Road
Library, PA 15129
724-348-7013
412-884-7569

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 # SWP-108-87 / WV 0109029
Rd 2 Box 410
Colliers, WV 26035
304-748-0014

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Office of Oil and Gas

JUL 12 2019

WV Department of
Environmental Protection

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

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

Energy Solutions Services, Inc. Permit # R-73006-124
1560 Bear Creek Road
Oak Ridge, TN 37830

Northern A-1 Environmental Services Permit ID MID020906814
8947 US 131 North, PO Box 1030
Kalkaska, MI 49646
231-258-9961

Water Haul off Companies:

Dynamic Structures, Clear Creek DOT # 720485
3790 State Route 7
New Waterford, OH 44445
330-892-0184

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

Select Energy Services, LLC
PO Box 208997
Dallas, TX 75320-8997

Nuverra Environmental Solutions
11942 Veterans Memorial Highway
Masontown, WV 26542

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

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

Disposal Locations:

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

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

Adams #1 (Buckeye Brine, LLC)
Permit # 34-031-2-7177
28986 Airport Road
Coshocota, OH 43812
740-575-4484
512-478-6545

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

Force, Inc.
1380 Rte. 288 Hwy. E, Suite 303
Indiana, PA 15701

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

Equipment Transport
1 Tyler Court
Carlisle, PA 17015

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

Burns Drilling & Excavating
618 Crabapple Road P.O. Box
Wind Ridge, PA 15880

Nichols 1-A (SWIW #13)
Permit # 3862
300 Charrington Pkwy, Suite 200
Coraopolis, PA 15108
412-829-7275

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

Kamble 1-D Well
Permit # 8780
7675 East Pike
Norwich, Oh 43767
614-648-8898
740-786-6495

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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
2680 Exposition, Suite 117
Austin, TX 78708
512-478-6545

Mozena #1 Well (SWIW # 13)
Permit # 34-157-2-5511-00-00
5367 E. State Street
Newcomerstown, OH 43882
740-763-3966

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

SOS D#1 (SWIW #12)
Permit # 34-059-2-4202-00-00
Silcor Oilfield Services, Inc.
2999 Hubbard Road
Youngstown, OH 44505

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

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

US Steele 11385
Permit # 47-001-00561
200 Evergreen Drive
Waynesburg, PA 15780
804-323-6568

Chaplin #7 UIC (SWIW #7)
Permit # 34-083-2-4187-00-00
Elkhead Gas & Oil Company
12168 Marne Rd. NE
Newark, OH 43055
740-763-3966

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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

SDW
6/19/19

HG Energy II Appalachia, LLC

5260 Dupont Road

Parkersburg, WV 26101

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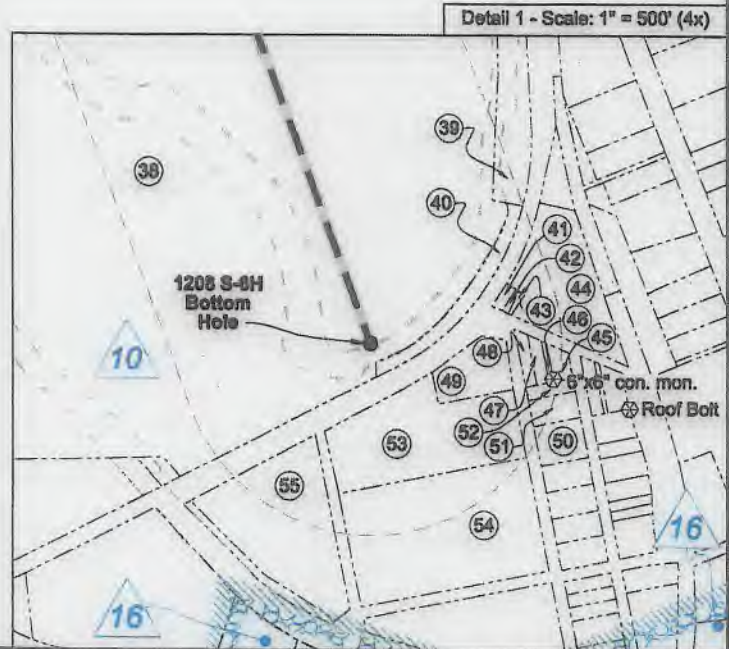
JUL 12 2019

WV Department of
Environmental Protection

Harrison County - Grant-Outside District				
No.	TM / Par	Owner	Bk / Pg	Ac.
1	425 / 31	Linda & William W. Brodwater III	1410 / 1045	247.84
2	445 / 1	Lisa M. Nutter	1577 / 738	87.78
3	444 / 14	Robert J. Brightbill	1960 / 293	55.62
4	445 / 10	Lisa M. Nutter	W687 / 445	66.87
5	445 / 9	Lisa M. Nutter	W687 / 445	105.50
6	444 / 13	William B. & Connie C. Ferrell	1057 / 13	24.15
7	445 / 8	Lie M. Nutter	1366 / 790	0.18
8	445 / 22	Eric K. & Susie G. Decker	1367 / 1275	78.10
9	445 / 16	Joseph E. Layman	1519 / 222	18.75
10	445 / 20	Edwin & Gertrude Bush Trustees	1425 / 846	91.70
11	445 / 18	George W. & Sandra Garton	1425 / 838	30.52
12	445 / 19	Howard L. & Nancy R. McKay	1162 / 709	0.87
13	445 / 17	Joseph E. Layman	1519 / 222	30.39
14	445 / 18.1	Wendy M. & Richard W. Pittman Jr.	1616 / 823	11.00
15	445 / 44	Danny K. & Katherine Snyder	F120 / 161	95.51
16	485 / 2	William C. White	1376 / 325	6.12
17	465 / 2.1	William C. White	-- / --	3.73
18	465 / 3	Patricia T. Garton	1425 / 854	4.58
19	465 / 1.1	Carla K. Barron	1421 / 374	5.01
20	465 / 1.3	Stutler Holdings LLC	1524 / 668	2.71
21	465 / 1.2	Roy Gregory Juckett	1437 / 1115	6.45
22	465 / 1	William C. White	1376 / 325	55.94

Lewis County - Hackers Creek District				
No.	TM / Par	Owner	Bk / Pg	Ac.
23	8B / 4	Thomas E. & Terri E. Hawkins	602 / 141	64.50
24	8B / 6	Roy Juckett	638 / 520	34.00
25	8B / 5	Thomas E. & Terri E. Hawkins	425 / 272	95.88
26	8B / 5.1	Jane Lew Water Commission	000 / 000	6.62
27	8B / 7.3	Risha Family LP	712 / 700	3.21
28	8B / 7.16	Big Brother & Holding Co.	682 / 776	4.77
29	8C / 29	C.D. Cole II	631 / 143	113.00
30	8B / 7.1	D.B. Company LLC	566 / 280	6.08
31	8B / 7.2	USARC Military Reservation	509 / 780	9.83
32	8C / 30	RGL Inc.	665 / 707	11.90
33	8C / 30.2	Victoria S. Martin	465 / 37	11.91
34	8C / 31	Victoria S. Martin	380 / 183	5.51
35	8C / 31.3	Victoria S. Martin	349 / 591	5.00
36	8C / 33.2	C.D. Cole	502 / 70	150.51
37	8C / 33	Lantetta S. & Glenn K. Myers	598 / 332	6.73
38	8C / 34	Charles D. Cole, II	437 / 680	136.87
39	1 / 9	Mike Ross, Inc.	531 / 303	1.31
40	1 / 10.1	Mike Ross, Inc.	531 / 303	0.36
41	1 / 8	Dorothy & Scott Smith	383 / 111	0.05
42	1 / 83	Glass Source Inc.	543 / 185	0.02
43	1 / 8.1	Dorothy & Scott Smith	383 / 111	0.12
44	1 / 11	Glass Source Inc.	543 / 185	1.75
45	1 / 13	April M. Exline	661 / 163	0.08
46	1 / 12	Deloris L. Garton	700 / 232	0.05
47	1 / 7	Deloris L. Garton	700 / 232	0.10
48	1 / 6	Deloris L. Garton	700 / 232	0.11
49	1 / 2	Charles D. Cole II	437 / 680	0.50
50	1 / 3	Allen C. & Christen L. Holcomb	683 / 89	0.26
51	1 / 4	Lucille R. Hicks	701 / 402	0.20
52	1 / 5	Lucille R. Hicks	701 / 402	0.10
53	1 / 1	Charles D. Cole II	437 / 680	2.05
54	2 / 22	Charles D. Cole II	437 / 680	3.44
55	2 / 21	Charles D. Cole II	437 / 680	2.25

ID	Lease
1	Jerome B. Gusman
2	Leeman B. Maxwell Heirs
3	A.J. Smith, et ux
4	W.L. & Flora Hughes
5	Hannah H. Smith
6	Walter Neely, et al
7	Paga Harmer Thomas, et al
8	Howard Neely
9	W.A. Jackson
10	Isaac Jackson
11	Pearl Reel
12	William C. White
13	J.W. Jackson
14	Mike Ross, Inc.
15	Garnett M. Corley
16	William White et al.
18	David Kent Moss, et al



FILE NO: 195-36-G-18
DRAWING NO: 1208 S-6H Well Plat
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY:
Submeter
PROVEN SOURCE OF ELEVATION:
CORS, Bridgeport, WV

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

DATE: July 3 20 19
OPERATOR'S WELL NO. 1208 S-6H
API WELL NO **HGA**
47 - 033 - 05157
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,147' WATERSHED: Middle West Fork Creek
DISTRICT: Grant / Hackers Creek

Top - West Milford
QUADRANGLE: Btm - Weston
COUNTY: Harrison / Lewis

SURFACE OWNER: Linda & William W. Brodwater III
ROYALTY OWNER: Leeman B. Maxwell Heirs, et al

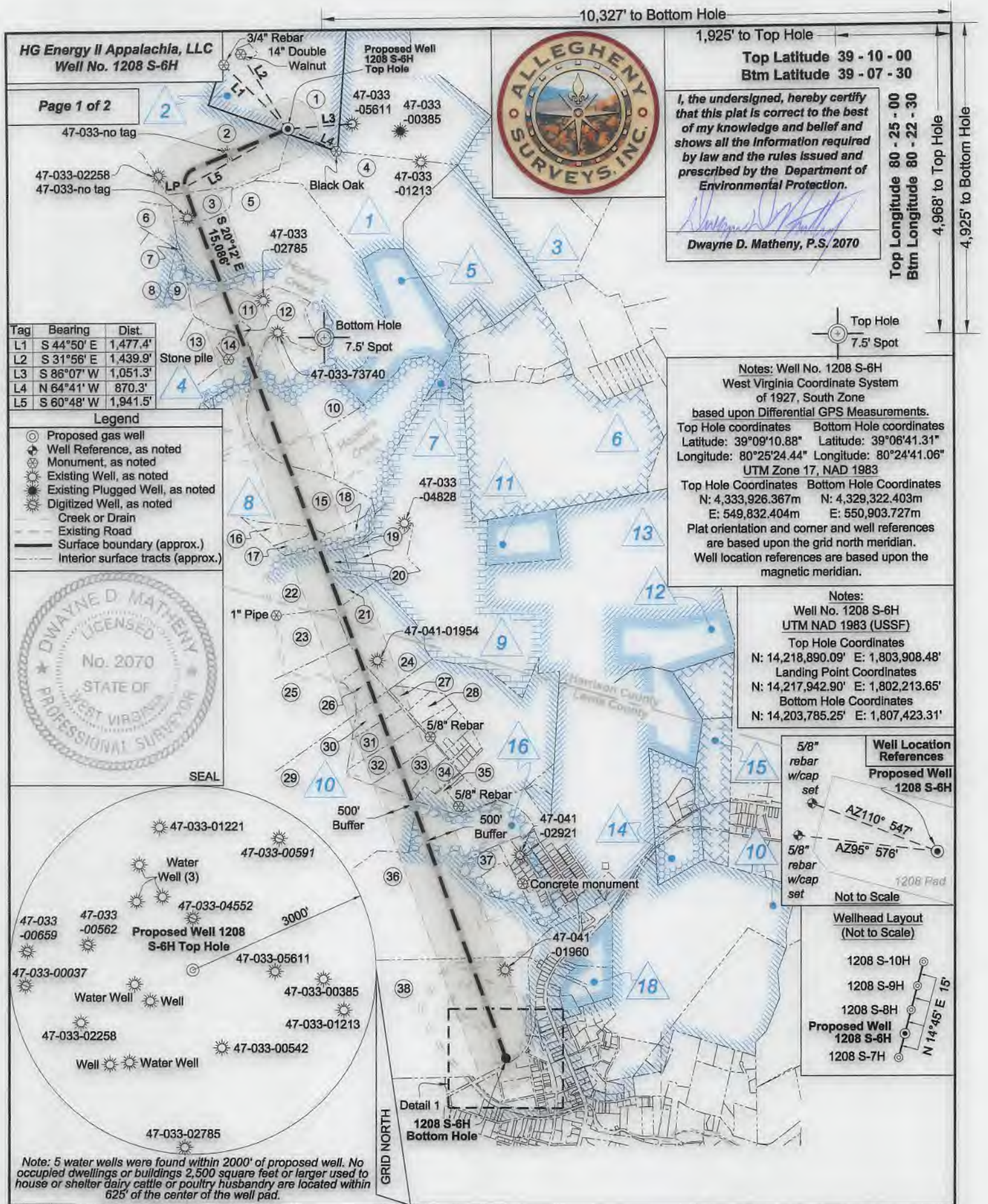
ACREAGE: 200
LEASE NO: ACREAGE: 247.84

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

PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 23,018' MD 7,050' TVD

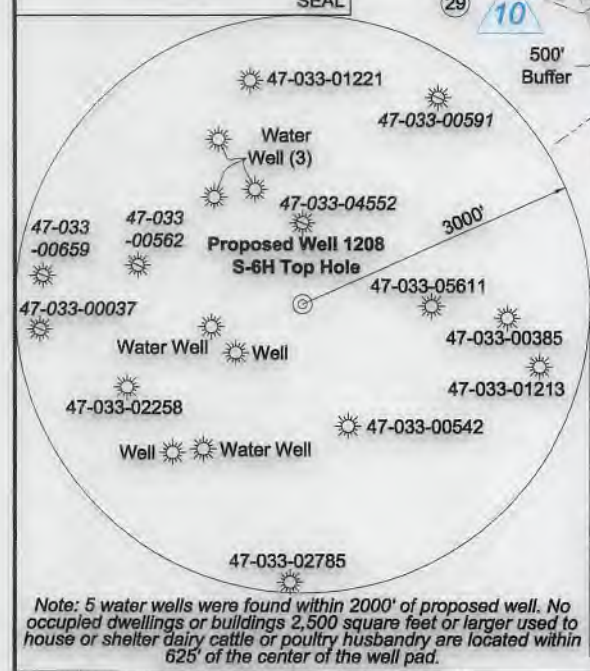
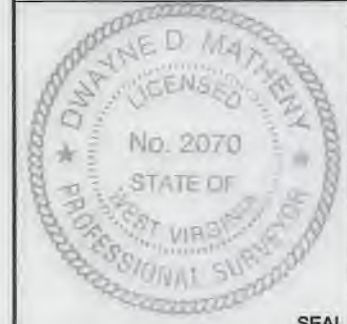
WELL OPERATOR: HG Energy II Appalachia, LLC
ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101

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



Tag	Bearing	Dist.
L1	S 44°50' E	1,477.4'
L2	S 31°56' E	1,439.9'
L3	S 86°07' W	1,051.3'
L4	N 64°41' W	870.3'
L5	S 60°48' W	1,941.5'

- 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.)

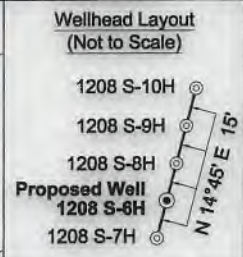
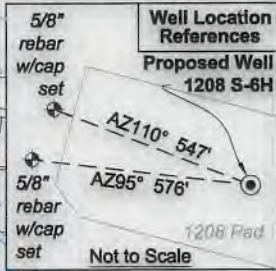


Note: 5 water wells were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.

10,327' to Bottom Hole
1,925' to Top Hole
Top Latitude 39 - 10 - 00
Btm Latitude 39 - 07 - 30
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
Top Longitude 80 - 25 - 00
Btm Longitude 80 - 22 - 30
4,968' to Top Hole
4,925' to Bottom Hole

Notes: Well No. 1208 S-6H
West Virginia Coordinate System of 1927, South Zone
based upon Differential GPS Measurements.
Top Hole coordinates Bottom Hole coordinates
Latitude: 39°09'10.88" Latitude: 39°06'41.31"
Longitude: 80°25'24.44" Longitude: 80°24'41.06"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,333,926.367m N: 4,329,322.403m
E: 549,832.404m E: 550,903.727m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

Notes:
Well No. 1208 S-6H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,218,890.09' E: 1,803,908.48'
Landing Point Coordinates
N: 14,217,942.90' E: 1,802,213.65'
Bottom Hole Coordinates
N: 14,203,785.25' E: 1,807,423.31'



FILE NO: 195-36-G-18
DRAWING NO: 1208 S-6H Well Plat
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

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

DATE: July 3 20 19
OPERATOR'S WELL NO. 1208 S-6H
API WELL NO. W-6
47 - 033 - 0593A
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1,147' WATERSHED: Middle West Fork Creek
DISTRICT: Grant / Hackers Creek
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: 23,018' 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

**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
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** See Attached Sheets **

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

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

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

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

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

16	N/A	21-04-0005-0056-0000; 21-04-0005-0057-0000; 21-04-0005-0058-0000; 21-04-0005-0059-0000; 21-04-0005-0060-0000; 21-04-0005-0061-0000; 21-04-0005-0065-0000; 21-04-008C-0033-0000; 21-04-008C-0033-0001; P/c 21-04-008C-0033-0002; 21-04-008C-0033-0003;		William C. White	HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8	741	607
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HG Energy, LLC
5260 Dupont Road
Parkersburg, WV 26101
(304) 420-1100 - Office
(304) 863-3172 - Fax

June 21, 2019

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

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WV Department of
Environmental Protection

RE: Drilling Under Roads – Nutter 1208 S-6H
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

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

Date of Notice Certification: 06/21/2019

API No. 47- _____ - _____

Operator's Well No. Nutter 1208 S-6H

Well Pad Name: Nutter Well Pad

Notice has been given:

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

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

UTM NAD 83 Easting: 549832.4
Northing: 4333926.4
Public Road Access: SR 19
Generally used farm name: Nutter

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

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

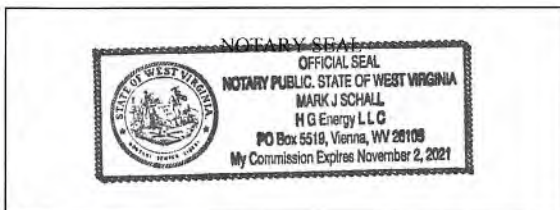
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication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

WW-6AC
(1/12)

Certification of Notice is hereby given:

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

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



Subscribed and sworn before me this 21st day of June, 2019.

Mark J. Schall Notary Public

My Commission Expires 11/2/2021

Oil and Gas Privacy Notice:

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

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

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

Date of Notice: 07/09/2019 **Date Permit Application Filed:** 07/15/2019

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.

Notice is hereby provided to:

SURFACE OWNER(s)
 Name: Lisa Nutter (Surface, Road, Water)
 Address: 382 Hidden Valley Road
Jane Lew, WV 26378
 Name: William W. & Linda Broadwater (Surface and Water Well)
 Address: 132 Praise Lane
Jane Lew, WV 26378

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

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

COAL OWNER OR LESSEE
 Name: _____
 Address: _____

COAL OPERATOR
 Name: _____
 Address: _____

WATER PURVEYOR(s)
 Name: See Above
 Address: _____

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

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JUL 12 2019
WV Department of
Environmental Protection

*Please attach additional forms if necessary

Notice is hereby given:

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

This Notice Shall Include:

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

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall also 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.

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.

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.

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 permitted 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.

JUL 12 2019

Well Location Restrictions

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

WW-6A
(5-12)

API NO. 47- -
OPERATOR WELL NO. Nutter 1208 S-6H
Well Pad Name: Nutter 1208

factors, if necessary.

Written Comment:

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

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

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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API NO. 47- _____ - _____
OPERATOR WELL NO. Nutter 1208 S-6H
Well Pad Name: Nutter 1208

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.

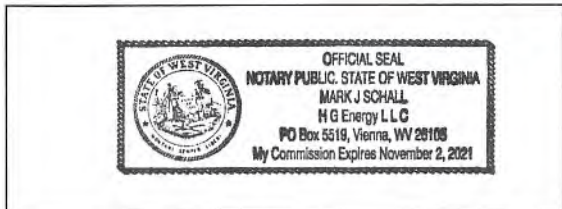
Notice is hereby given by:

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

Oil and Gas Privacy Notice:

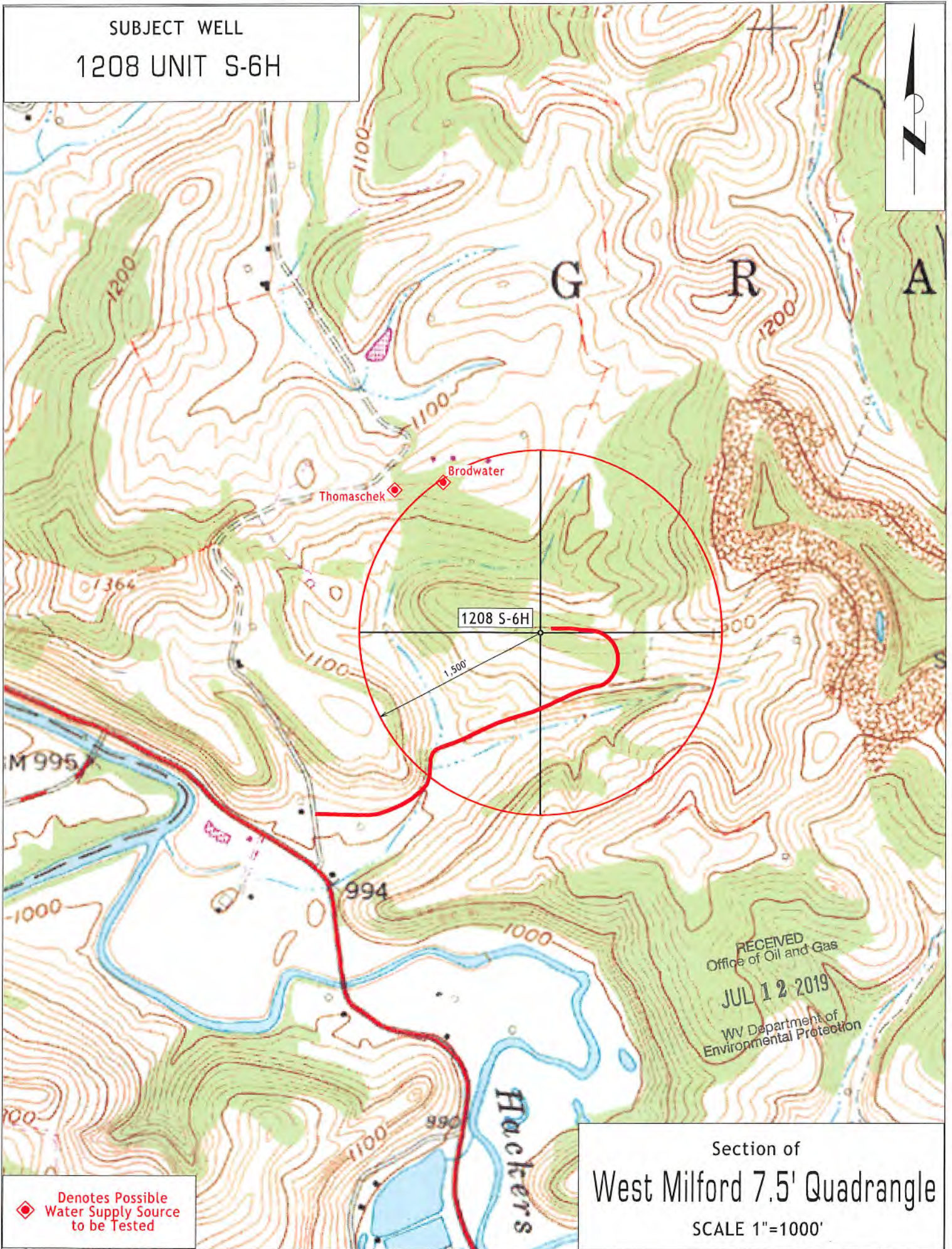
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory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



Subscribed and sworn before me this 9 day of July, 2019.
Mark J. Schall Notary Public
My Commission Expires 11/2/2021

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Environmental Protection

SUBJECT WELL
1208 UNIT S-6H



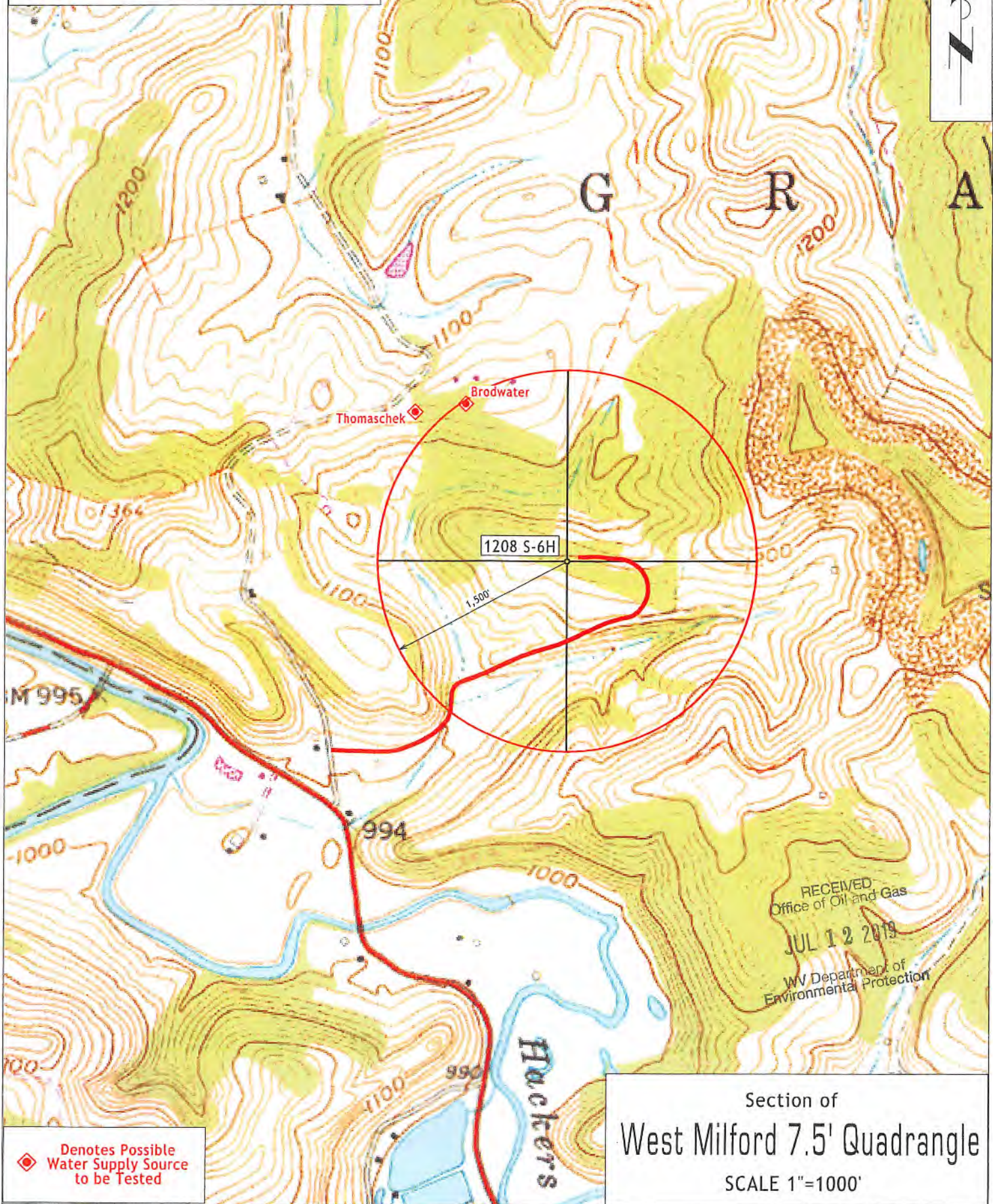
◆ Denotes Possible
Water Supply Source
to be Tested

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

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4708805959

SUBJECT WELL
1208 UNIT S-6H



G R A

1208 S-6H

1,500'

Thomaschek

Brodwater

M 995

1000

994

Hackers

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WV Department of
Environmental Protection

◆ Denotes Possible
Water Supply Source
to be Tested

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

**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: 5/31/2019 **Date of Planned Entry:** 6/07/2019

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 Sheets**
 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>39.153114 / 80.423270</u>
County: <u>Harrison/Lewis</u>	Public Road Access: <u>SR 19/ Hackers Creek Road</u>
District: <u>Grant/Union</u>	Watershed: <u>Middle West Fork Creek</u>
Quadrangle: <u>West Milford</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

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.



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

4703305959

August 10, 2018

Re: Lease Boundary Surveys – 1208 Drilling Unit

To: Landowners Located within the 1208 Drilling Unit:

HG Energy II Appalachia, LLC (HG) is planning to drill a Marcellus well in Harrison and Lewis Counties, WV. Your property has been identified as being located within the proposed drilling unit area.

HG has contracted with Allegheny Surveys, Inc. (ASI) of Bridgeport, WV to accurately locate and map HG's lease boundaries in the drilling unit. This letter is provided as authorization for ASI to act as agent on behalf of HG to survey and map HG's lease boundaries in preparation for the prospective well work permit.

As agent for HG, ASI is expected conduct its operations in a safe, courteous and respectful manner. If you have any problems with the survey crew on your property, or if you have any questions regarding HG's operations, you may call me at 304-420-1120 to discuss.

Thanks you for your cooperation with us during this project.

Respectfully,

Timothy P. Roush, PS

Operations Land Manager
HG Energy II Appalachia, LLC
5260 Dupont Road
Parkersburg, WV 26101

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

4703305959

May 31, 2019

RE: Nutter 1208 Well Pad (S-6H thru S-10H)
Grant District, Harrison County
West Virginia

To Whom It May Concern:

Enclosed is a copy of a Department of Environmental Protection "Notice of Entry For Plat Survey" form WW-6A3. This notice is provided to you as a royalty owner to advise you that HG Energy II Appalachia, LLC, is beginning the process of applying for permits to drill a well(s) where you are identified as an owner of minerals underlying such tract in the county tax records. A well work permit application will be filed with the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas.

Pursuant to WV Code Chapter 22B, Article 6, you are receiving copies of this correspondence because you are an owner of mineral rights on one or more of the underlying leases impacted by this well (s). Your rights as a royalty owner can be obtained from the Secretary at the WVDEP at 304-926-0450.

No action on your part is required. If you have any questions or comments regarding this application, you may call this office at (304) 420-1119.

Very truly yours,

Diane White

Diane C. White

Enclosures

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Mineral Owners

Ann Brashear Fitzgerald
625 Windsor PL.
Tyler, TX 75701

AnnaBelle Lawton Family Trust
July 26, 1994 by William E. Lawson
and Thomas C. Lawton, as Co-Trustees
1228 N. Park Ave
Winter Park, FL 32789-2542

Argent Trust Company
Agent for Mary V Gray Trust 1983
c/o David M. Gray
621 N. Robinson, Suite 100
Oklahoma City, OK 73102

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

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

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

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

Argent Trust Company
Agent for Elizabeth A Beveridge
621 N. Robinson, Suite 100
Oklahoma City, OK 73102

Argent Trust Company
Agent for Jane M Hardin
621 N. Robinson, Suite 100
Oklahoma City, OK 73102

Argent Trust Company
Agent J R Gray & T D Koubek
621 N. Robinson, Suite 100
Oklahoma City, OK 73102

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

Argent Trust Company
Agent for Karen M Henderson
621 N. Robinson, Suite 100
Oklahoma City, OK 73102

Argent Trust Company
Agent for Kimberlee K Holland
621 N. Robinson, Suite 100
Oklahoma City, OK 73102

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

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Mineral Owners

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

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

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

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

Beverly Mae Street
9062 Water Tupelo Road
Fort Myers, FL 33912

Broad Run Baptist Church
PO Box 542
Jane Lew, WV 26378

Broad Run Baptist Church
Cemetery Association
PO Box 504
Jane Lew, WV 26378

Buckner W. Hornor
6904 Cortez Rd West, Lane 4, Unit 28
Bradenton, FL 34210

C. J. Martin, II
PO Box 788
Buckhannon, WV 26201

Carolyn Louise Street
205 Hidden Meadows Circle
Renfrew, PA 16053

Catherine E Davisson
83 Cameron Rd
Clarksburg, WV 26301

Cathy L Watson
PO Box 764
Jane Lew, WV 26378

Celia Linn Ferrell Baiker
5958 Chestnut Ct
Virginia Beach, VA 45424

Chandra D. Beam
PO Box 382
Jane Lew, WV 26378

Charles E. Garton Trust
PO Box 1234
Weston, WV 26452

Dale R. Holden
904 Kincheloe Road
Jane Lew, WV 26378

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Mineral Owners

David Neely Thru~~sh~~
865 Seddon Cove Way
Tampa, FL 33602

Deborah Nay Stutler
9967 WV Route 185
New Milton, WV 26411

Delores Jean Moats~~s~~
90 Kincaidville Road
Walkersville, WV 26447

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

Donna L. Hutton~~s~~
828 Tremont Ave
Lexington, KY 40502-2234

Eric R. Smith~~s~~
1608 Smith Run Road
Weston, WV 26452

Ethel Jane Harman~~s~~
PO Box 443
Jane Lew, WV 26378

Frank H. Neely~~s~~
21 Belmeade Terrace
Uniontown, PA 15401-5237

Gary Manford~~s~~
824 Mullen Road
Los Ranchos, NM 87107

Geneva Bruffey~~s~~
500 Henrie Lane
Williamstown, WV 26187

Gertrude Bush~~s~~
1165 South Blue Creek Road
Couer Dalene, ID 83814

Gregory Hurd and Trisha Hurd~~s~~
PO Box 714
Jane Lew, WV 26378

Iden Scott McWhorter~~s~~
1661 LaFrance St NE, Unit 314
Atlanta, GA 30307

Jack Street Testamentary Trust Fund A
& Fund B, by Carolyn L Street, Trustee
205 Hidden Meadows Circle
Renfrew, PA 16053

Jackson L. Smith~~s~~
PO Box 457
Lost Creek, WV 26385

James R. Kettering Jr.~~s~~
122 Center Court
Bridgeport, WV 26330

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

Jane Elizabeth Horn~~s~~
958 McCanns Run Road
Jane Lew, WV 26378

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Mineral Owners

Jane Elizabeth Thrush
49 Buckeye Ave
Oakland, CA 94618

Jane Lew Water Commission
PO Box 845
Jane Lew, WV 26378

Jeffrey Alan Street
6017 Pine Ridge Road Suite 190
Naples, FL 34119

Jill Lambert
219 Ballantrae St
Valparaiso, IN 46385

John Daniel Justice
1715 Locust Ave
Ashland, KY 41101

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

John M. Zimowski
2437 Buccaneer Blvd
Greenbackville, VA 23356

John P. Hutton
1906 Oak Ridge Dr
Charleston, WV 25311

Joseph E. Layman
431 Barnes St
Fairmont, WV 26554

Julie D. McWhorter
PO Box 447
Jane Lew, WV 26378

Larry Robert Street
111 Dale Wood Drive
Lavalette, WV 25535

Lawrence Blair Thrush, Jr
9 Fox Chase Road
Charlestown, WV 25304-2755

Lewis County Board of Education
358 Court Ave
Weston, WV 26452

Lonnie C Paugh and Karen L Paugh
PO Box 573
Jane Lew, WV 26378

Lonnie Kincaid
28 Bablin Ingo Road
Ireland, WV 26376

Lucille Davisson
1108 Oakbridge Drive
Hurricane, WV 25526-8838

Lundy H and Deborah H McMillion
101 Locust St
Jane Lew, WV 26378

Mark Fitzpatrick
84 Keith Fork Road
Weston, WV 26452

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Mineral Owners

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

Mary Jane Lewis
PO Box 504
Lost Creek,, WV 26385

Mary Louise Thrush McDowell
2607 West 16th St
Wilmington, DE 19806

Matthew William Street
13761 Fieldshire Terrace
Carmel, IN 46074

Mike Ross Inc
PO Box 219
Coalton, WV 26257

Mildred L. Haller
608 Center Ave
Weston, WV 26452

Paul Allen Hornor Jr.
122 Center Court
Bridgeport, WV 26330-6749

Peter K. Thrush
1168 Halleck Road
Morgantown, WV 26508-2370

R.L. Roberts
2871 West Virginia HWY 5 W
Glennville, WV 26351-7727

Robert T Swiger and Cynthia M Swiger
PO Box 908
Jane Lew, WV 26378

Roger Justice
877 Plymouth Rd NE
Atlanta, GA 30306

Shayne P. Baldwin
PO Box 872
Jane Lew, WV 26378

Sidney Wallace Street
2863 Yajoa Place
Hacienda Hieghts, CA 91745

Stephanie A. Snow-McKisic
PO Box 767
Jane Lew, WV 26378

Suzanne Louise Street
174 Willamette Drive
Bear, DE 19701

Thom William Street
316 Morgan Circle North
Lehigh Acres, FL 33936

Thomas C. Davisson
83 Cameron Road
Clarksburg, WV 26301

Thomas E and Terri E Hawkins
7865 US Highway 19 North
Jane Lew, WV 26378-7931

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Mineral Owners

Thomas Earl Thrush
2300 McFarlin Road
Nolensville, TN 37135

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

Trina Noreene Smallwood
4444 River Forest Road
Marianna, FL 32446

Vivian Dianne Evert
828 Hidden Lake Road
Roberts, WI 54032

Walter Parke Thrush
263 Glen Abbey Lane
Clarksburg, WV 26301

Waymon B. Kincaid
3999 Georgetown Road
Horner, WV 26372

Wesley Craft Brashear, Jr.
12205 Creek Point Dr
Frisco, TX 75035

Willard H and Judy McWhorter
2042 Elk City Rd.
Jane Lew, WV 26378

William C. White
PO Box 770
Jane Lew, WV 26378

William Edward Watson
800 Main Street
Wellsburg, WV 26070

William R. Stalnaker
160 Stalnaker Estates
Glennville, WV 26351-7727

Zane Anthony Justice
2706 Algonquin Ave
Ashland, KY 41102

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

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

Date of Notice: 5/31/2019 **Date of Planned Entry:** 6/07/2019

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 Sheets**
 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>39.153114 / 80.423270</u>
County: <u>Harrison</u>	Public Road Access: <u>SR 19/ Hackers Creek Road</u>
District: <u>Grant</u>	Watershed: <u>Middle West Fork Creek</u>
Quadrangle: <u>West Milford</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@hgeneryllc.com

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

RECEIVED
 Office of Oil and Gas
 JUL 12 2019
 WV Department of
 Environmental Protection

Oil and Gas Privacy Notice:

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

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

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

Notice Time Requirement: Notice shall be provided at least TEN (10) days prior to filing a permit application.
Date of Notice: 06/20/2019 **Date Permit Application Filed:** 06/30/2019

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

HAND DELIVERY CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

Notice is hereby provided to the SURFACE OWNER(s):

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

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

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 549832.4
County: Harrison Northing: 4333926.4
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@hgeneryllc.com
Facsimile: 304-863-3172

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

RECEIVED
Office of Oil and Gas

JUL 12 2019

WV Department of
Environmental Protection

Oil and Gas Privacy Notice:

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



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

Byrd E. White, III
 Secretary of Transportation

June 24, 2019

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

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

Subject: DOH Permit for the Nutter 1208 Pad, Harrison County
 S-6H Well site

Dear Mr. Martin,

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

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

Very Truly Yours,

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

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

RECEIVED
 Office of Oil and Gas
 JUL 12 2019
 WV Department of
 Environmental Protection

List of Frac Additives by Chemical Name and CAS #

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

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

RECEIVED
Office of Oil and Gas
JUL 12 2019
WV Department of
Environmental Protection

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

**APPROVED
WVDEP OOG**

2/28/2019

GRANT DISTRICT HARRISON COUNTY WEST VIRGINIA

Estimated Gross Material Balance (CY)			
Final Development - Gravel Option			
	Cut	Fill	S
1208 Well Pad & Staging Area	66,552	66,513	-4
Access Road	8,599	5,664	2
Total	65,149	70,767	-4
Soil Adjustment for Aggregate Import:			
Plus			
Total Site Balance:			2
Stripped Topsoil (Limit of Disturbance)			
Est. Swell Factor (20%)			
Est. Topsoil Stockpile Volume (Loose CY)			2
Minimum Total Stockpile Capacity Required (CY)			2

- Notes:
1. Material balance for est. gross earthwork quantities only.
 2. Topsoil est. volume based on 6 inches average depth.
 3. Material balance and aggregate quantities based on est. and may not be representative of actual quantities.
 4. Estimates do not reflect contractor pay volumes.

Estimated Gravel Quantities			
	18% W-48 Pav. 8.5% AST Area	12% W-48 Road	Aggregate
8" Soil Cement (Placed SY)	30,111	14,147	9.87
3" Depth of 3/4" Crusher Run (Tons)	3,382	1,533	--
Top Coat Chio & Seal (Placed SY)	--	--	9.87

Estimated Total Concrete Filter Sock Length (LF)	
Estimated Access Road Filter Sock Length (LF)	
Estimated Well Pad and Staging Area Filter Sock Length (LF)	
Estimated Total Limit of Disturbance (Acres)	
Estimated Access Road Limit of Disturbance (Acres)	
Estimated Well Pad and Staging Area Limit of Disturbance (Acres)	
Well Pad and Staging Area Peak Pre-Construction Elevation (F)	

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 trees that are to be conserved within the project site, and shall install appropriate barriers where equipment may not be parked, staged, operated or located for any purpose.
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

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 80.424
N-2H	N 39.153340	W 80.424
N-3H	N 39.153379	W 80.424
N-5H	N 39.153419	W 80.424
N-4H	N 39.153459	W 80.424
S-7H	N 39.153074	W 80.423
S-6H	N 39.153114	W 80.423
S-8H	N 39.153154	W 80.423
S-9H	N 39.153193	W 80.423
S-10H	N 39.153233	W 80.422

	LATITUDE	LONGITUDE
1208 WELL PAD ACCESS ROAD ENTRANCE	N 39.149029	W 80.422

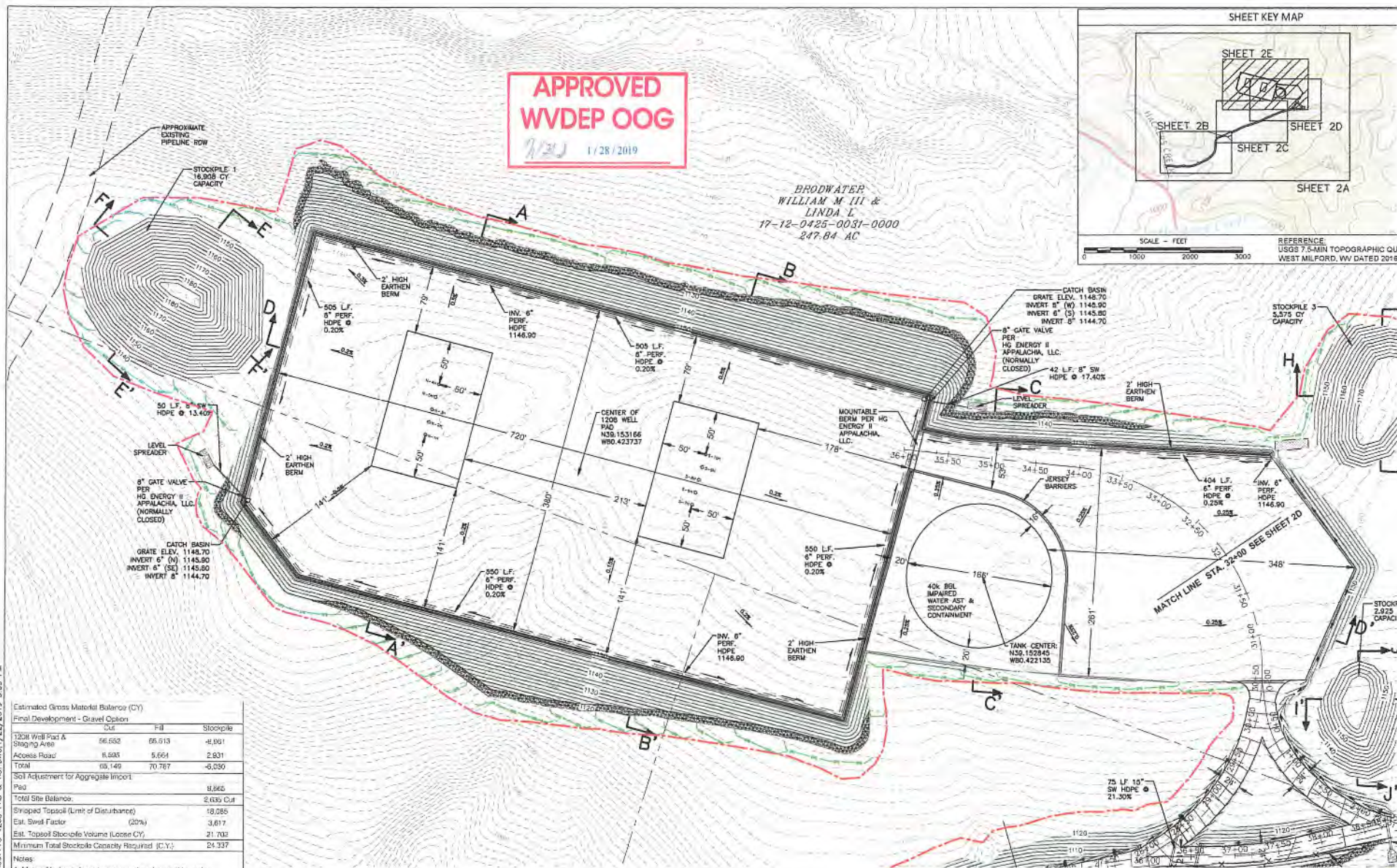
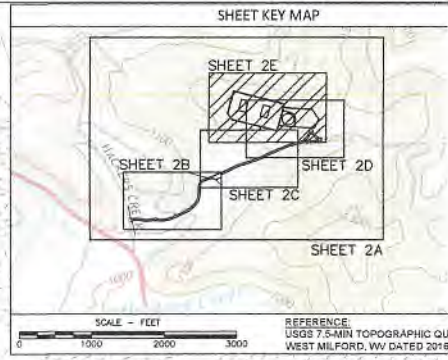
RECORD OWNER	RECORD LOT #	RECORD AREA OF LOT	AC WITHIN
NUTTER LISA M	17-12-0445-0009-0000	105.50 AC.	2.11
FELDT CAROL (LE) NUTTER LISA M	17-12-0445-0001-0000	87.78 AC.	4.11
NUTTER LISA M	17-12-0445-0010-0000	66.87 AC.	4.11
BROADWATER WILLIAM M III & LINDA L	17-12-0445-0031-0000	247.84 AC.	11.11
TOTAL LIMIT OF DISTURBANCE			22.4

WEST VIRGINIA 811 CALL BEFORE YOU DIG! **DI 800** (Area 101)

1. SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING, AND REPAIRING AS NECESSARY TO ENSURE CONTINUAL SERVICE.

APPROVED WVDEP OOG
 1/20 1/28/2019

BRODWATER
 WILLIAM M III &
 LINDA L
 17-12-0425-0031-0000
 247.84 AC



Estimated Gross Material Balance (CY)

Final Development - Gravel Option	Cut	Fill	Stockpile
1208 Well Pad & Staging Area	66,632	65,513	-8,091
Access Road	8,505	5,664	2,831
Total	65,149	70,767	-6,030

Soil Adjustment for Aggregate Import

Pad	8,866		
Total Site Balance	2,695	6,901	

Stripped Topsoil (Limit of Disturbance)

Est. Swell Factor (20%)		3,617	
Est. Topsoil Stockpile Volume (Loose CY)		21,703	
Minimum Total Stockpile Capacity Required (CY)		24,337	

- Notes:
1. Material balance for est. gross artwork quantities only.
 2. Topsoil est. volume based on 8 inches average depth.
 3. Material balance and aggregate quantities based on estimates and may not be representative of actual quantities.
 4. Estimates do not reflect contractor pay volumes.

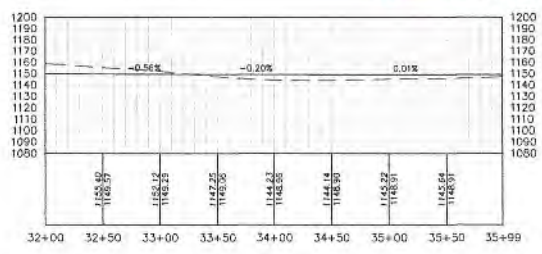
Estimated Gravel Quantities

	190194E	190194E	190194E	190194E	TOTAL
	Pad	Access	Stock	Flow	
8\"/>					

Estimated Total Compact Filter Sock Length (LF)

Estimated Access Road Filter Sock Length (LF)	2,634
Estimated Well Pad and Staging Area Filter Sock Length (LF)	3,976
Estimated Total Limit of Disturbance (Acres)	22.421
Estimated Access Road Limit of Disturbance (Acres)	7.021
Estimated Well Pad and Staging Area Limit of Disturbance (Acres)	15.289
Well Pad and Staging Area Peak Pre-Construction Elevation (IP)	1182.0

WELL #	LAT.	LONG.
N-1H	N 39.153300	W 80.424351
N-2H	N 39.153340	W 80.424337
N-3H	N 39.153379	W 80.424324
N-5H	N 39.153419	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



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

WEST VIRGINIA 811 **CALL BEFORE YOU DIG!** **DI 800**
WEST VIRGINIA

SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, MAINTAINING, AND REPLACING AS NECESSARY TO ENSURE CONTINUAL SERVICE.

S:\PROJECT FILES\4000-PAC07778 HG 1208\DRAWINGS\PA07778 1208 PAD & AST DWG\1/22/2019 3:03 PM