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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Friday, March 6, 2020  
WELL WORK PERMIT  
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC  
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for ANTONIO 1206 S-8H  
47-033-05985-00-00

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

A blue ink signature of James A. Martin, written in a cursive style, is placed over the printed name and title.

Operator's Well Number: ANTONIO 1206 S-8H  
Farm Name: ANTONIO P., LLC  
U.S. WELL NUMBER: 47-033-05985-00-00  
Horizontal 6A New Drill  
Date Issued: 3/6/2020

# 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](mailto:DEPOOGNotify@wv.gov).

WW-6B  
(04/15)

API NO. 47- \_\_\_\_\_ - \_\_\_\_\_  
OPERATOR WELL NO. Antonio 1206 S-8H  
Well Pad Name: Antonio 1206

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

1) Well Operator: HG Energy II Appalachia, LLC

<u>494519932</u>	<u>Harrison</u>	<u>Grant</u>	<u>West Milford 7.5'</u>
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Operator ID County District Quadrangle

2) Operator's Well Number: Antonio 1206 S-8H Well Pad Name: Antonio 1206

3) Farm Name/Surface Owner: HG Energy II Appalachia, LLC Public Road Access: Hackers Creek Rd @ SR 19

4) Elevation, current ground: 1364' Elevation, proposed post-construction: 1350'

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 7081' / 7260' and 179' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 7252'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 23,889'

11) Proposed Horizontal Leg Length: 16,175'

12) Approximate Fresh Water Strata Depths: 135', 480', 637', 731'

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

14) Approximate Saltwater Depths: NA

15) Approximate Coal Seam Depths: 623', 1010' to 1015' (Surface casing is being extended to cover the coal)

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

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

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_

Depth: \_\_\_\_\_

Seam: \_\_\_\_\_

Owner: \_\_\_\_\_

4703305985

WW-6B  
(04/15)

API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. Antonio 1206 S-8H  
Well Pad Name: Antonio 1206

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	1100'	1100'	40% excess, CTS
Intermediate 1	13 3/8"	NEW	J-55	68	2200'	2200'	40% excess, CTS
Intermediate 2	9 5/8"	NEW	J-55	40	3000'	3000'	40% excess tail, CTS
Production	5 1/2"	NEW	P-110	23	23889'	23889'	20% excess tail, CTS
Tubing							
Liners							

SDW  
12/14/2019

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	30"	.500				Drilled In
Fresh Water/Coal	20"	24"	.438	2110	1200	Type 1, Class A	40 % excess yield = 1.20, CTS
Intermediate 1	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	Load 40% excess, Tail 0% excess
Intermediate 2	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	Load 40% excess, Tail 0% Excess Load
Production	5 1/2"	8 1/2"	.415	16240	12500	Type 1/Class A	20% excess yield = 1.19, tail yield 1.24
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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JAN 07 2020

WV Department of  
Environmental Protection

4703305985

WW-6B  
(04/15)

API NO. 47- \_\_\_\_\_ - \_\_\_\_\_  
OPERATOR WELL NO. Antonio 1206 S-8H  
Well Pad Name: Antonio 1206

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

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

*SAW  
12/4/2019*

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus at 7081' / 7260' and 179' in thickness. Anticipated pressure at 4314#.

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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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DEC 7 2019

WV Department of  
Environmental Protection



**Antonio 1206 Well Pad (N-1H, N-2H, N-3H, N-4H, N-5H)**  
**Cement Additives**

Material Name	Material Type	Material Description	CAS #																		
Premium NE-1	Portland Cement	Premium NE-1 is a portland cement with early compressive strength properties.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Portland cement</td> <td>90 - 100</td> <td>65997-15-1</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> <tr> <td>Magnesium oxide</td> <td>1 - 5</td> <td>1309-48-4</td> </tr> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>0.1 - 1</td> <td>14808-60-7</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Portland cement	90 - 100	65997-15-1	Calcium oxide	1 - 5	1305-78-8	Magnesium oxide	1 - 5	1309-48-4	Crystalline silica: Quartz (SiO2)	0.1 - 1	14808-60-7			
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Bentonite	Extender	Commonly called gel, it is a clay material used as a cement extender and to control excessive free water.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>bentonite</td> <td>90 - 100</td> <td>1302-78-9</td> </tr> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	bentonite	90 - 100	1302-78-9	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7									
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Calcium Chloride	Accelerator	A powdered, flaked or pelletized material used to decrease thickening time and increase the rate of strength development	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Calcium chloride</td> <td>90 - 100</td> <td>10043-52-4</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Calcium chloride	90 - 100	10043-52-4												
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Cello Flake	Lost Circulation	Graded (3/8 to 3/4 inch) cellophane flakes used as a lost circulation material.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table>	Ingredient name	%	CAS number	No hazardous ingredient														
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FP-13L	Foam Preventer	FP-13L is a clear liquid organic phosphate antifoaming agent used in cementing operations. It is very effective minimizing air entrapment and preventing foaming tendencies of latex systems.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Tributyl phosphate</td> <td>90 - 100</td> <td>126-73-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Tributyl phosphate	90 - 100	126-73-8												
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Granulated Sugar	Retarder	Used to retard cement returns at surface. A proprietary product that provides expansive properties and improves bonding at low to moderate temperatures.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Sucrose</td> <td>90 - 100</td> <td>57-50-1</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Sucrose	90 - 100	57-50-1												
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EC-1	Gas Migration	Multi-purpose polymer additive used to control free fluid, fluid loss, rheology, and gas migration.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table>	Ingredient name	%	CAS number	No hazardous ingredient														
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Poz (Fly Ash)	Base	A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7	Calcium oxide	1 - 5	1305-78-8									
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R-3	Retarder	A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Organic acid salt</td> <td>40 - 50</td> <td>Trade secret.</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Organic acid salt	40 - 50	Trade secret.												
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S-5	Surfactant	Used to water wet casing and formation to facilitate cement bonding.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>2-Butoxyethanol</td> <td>20 - 30</td> <td>111-76-2</td> </tr> <tr> <td>Proprietary surfactant</td> <td>10 - 20</td> <td>Trade secret.</td> </tr> <tr> <td>D-Glucopyranose, oligomeric, C10-16-alkyl glycosides</td> <td>5 - 10</td> <td>110615-47-9</td> </tr> <tr> <td>Alkylarylsulfonate amine salt</td> <td>1 - 5</td> <td>Trade secret.</td> </tr> <tr> <td>Polyoxyalkylenes</td> <td>0.1 - 1</td> <td>Trade secret.</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	2-Butoxyethanol	20 - 30	111-76-2	Proprietary surfactant	10 - 20	Trade secret.	D-Glucopyranose, oligomeric, C10-16-alkyl glycosides	5 - 10	110615-47-9	Alkylarylsulfonate amine salt	1 - 5	Trade secret.	Polyoxyalkylenes	0.1 - 1	Trade secret.
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 Environmental Protection  
 AN 07 2020



**List of Frac Additives by Chemical Name and CAS #****Antonio 1206 Well Pad (N-1H to N-5H)**

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



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1206 S-8H  
Marcellus Shale Horizontal  
Harrison County, WV

Ground Elevation		1206 S-8H SHL		1206 S-8H LP		1206 S-8H BHL		1206 S-8H SHL		1206 S-8H LP		1206 S-8H BHL	
Azim		1350'		159.798°		1350'		159.798°		1350'		159.798°	
WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS			
X	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			
X	24"	20" 94# J-55	Fresh Water	0	135, 480, 637, 731	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			
X	17.5"	13-3/8" 68# J-55 BTC	Coal Surface / FW	0	1015 1100	AIR	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			
X	12.25"	9-5/8" 40# J-55 BTC	Little/Big Lime Injun / Gantz (Storage) Intermediate 1	0	1575 / 1658 1770 / 2050 2200	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			
X	8.5" Vertical	5-1/2" 23# P-110 HP CDC HTQ	Fifty / Thirty Foot Gordon Stray / Gordon 5th Sand Bayard / Warren Intermediate 2 Speechley Baltimore Benson Rhinstreet Cashaqua Middlesex West River Burkett Tully Limestone Hamilton Marcellus	0	2095 / 2182 2232 / 2272 2515 2591 / 2891 3000 3224 3448 4525 6651 6751 6783 6854 6864 6972 7081 7260	9.0ppg SOBIM	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			
X	8.5" Curve	5-1/2" 23# P-110 HP CDC HTQ	Middlesex West River Burkett Tully Limestone Hamilton Marcellus	0	6783 6854 6864 6972 7081 7260	11.5ppg-12.5ppg SOBIM	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 3 joints from the 1st 5.5" long joint to the top of the curve.	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			
X	8.5" Lateral	5-1/2" 23# P-110 HP CDC HTQ	TMD / TVD (Production) Onondaga	23889 7260	7252	11.5ppg-12.5ppg SOBIM	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 3 joints from the 1st 5.5" long joint to the top of the curve.	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			

LP @ 7252' TVD / 7714' MD  
8.5" Hole - Cemented Long String  
5-1/2" 23# P-110 HP CDC HTQ

+/-16175' ft Lateral  
TD @ +/-7252' TVD  
+/-23889' MD  
X=centralizers

4703305085


**PROPOSAL TO DRILL WITHIN DOMINION TRANSMISSION STORAGE FIELD**

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

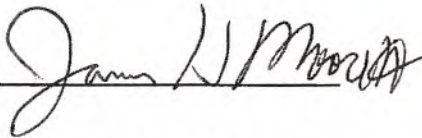
WELL NAME: Antonio 1206

Well # Antonio 1206 S-8H

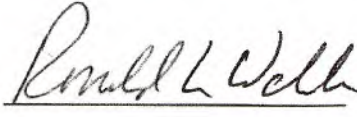
DISTRICT/COUNTY/STATE: Grant/Harrison/WV

Submitted   
JOSH HINTON  
HG ENERGY, LLC

DATE 12-12-19

Approved   
Dominion Energy Transmission

DATE 12/17/19

Approved   
Dominion Energy Transmission

DATE 12/18/19

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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▶ JAN 07 2020

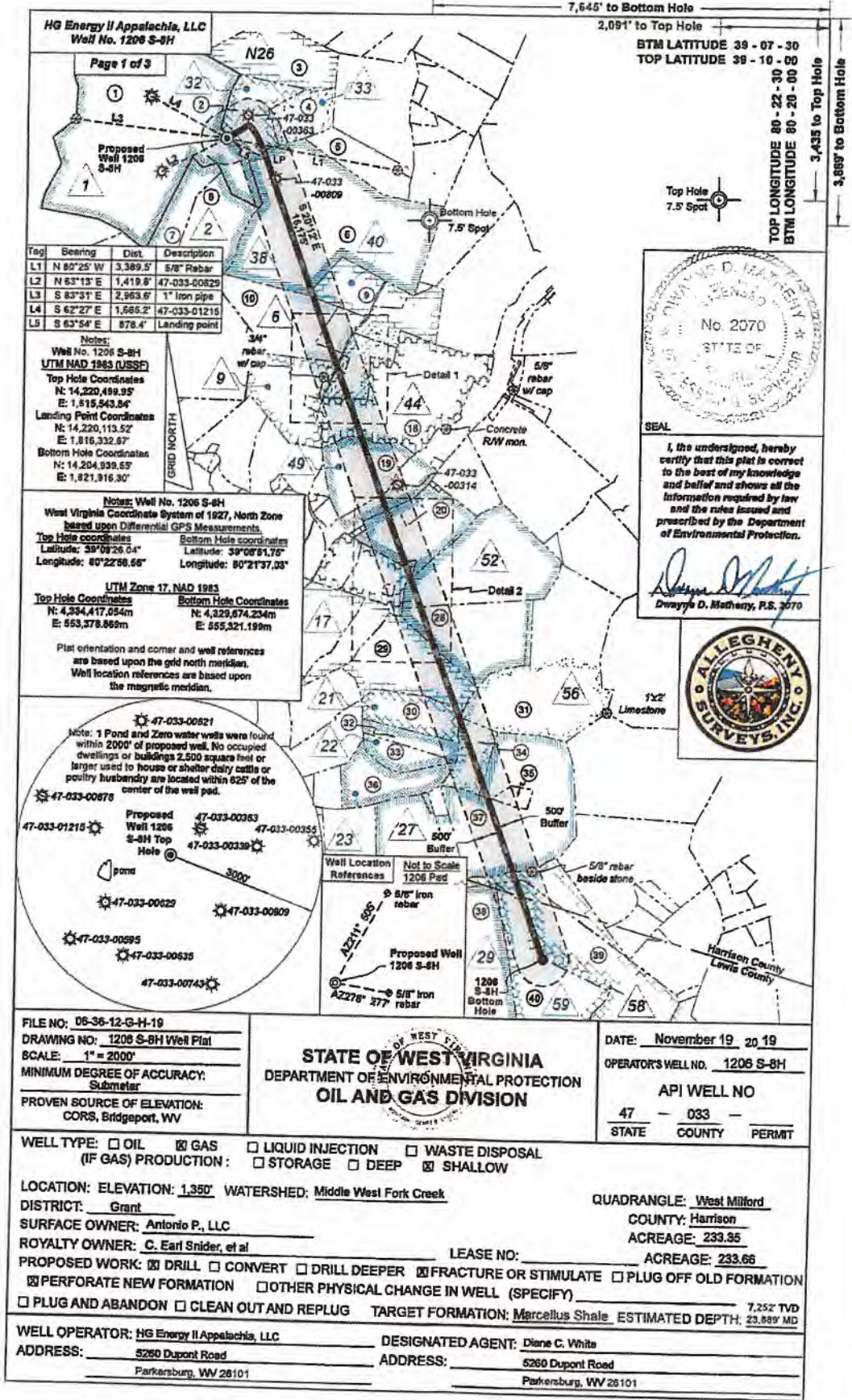
WV Department of  
Environmental Protection

Ground Elevation		1350'		159,798'		1206 S-8H SHL		1206 S-8H LP		1206 S-8H BHL		1206 S-8H		1206 S-8H		1206 S-8H		
Azim		1350'		159,798'		1206 S-8H SHL		1206 S-8H LP		1206 S-8H BHL		1206 S-8H		1206 S-8H		1206 S-8H		
WELLBORE DIAGRAM		1350'		159,798'		1206 S-8H SHL		1206 S-8H LP		1206 S-8H BHL		1206 S-8H		1206 S-8H		1206 S-8H		
HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS									
30"	30" 157.5# LS	Conductor	0	120	AIR	N/A. Casing to be drilled in w Dual Rotary Rig	N/A	Ensure the hole is clean at TD.	Conductor casing = 0.5" wall thickness									
24"	20" 94# J-55	Fresh Water	0	135, 480, 637, 731	AIR	15.9 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									
17.5"	13-3/8" 66# J-55 BTC	Little/Big Lima Injar / Genz (Storage)	1555 / 1566 1858 / 1885	1770 / 2050	AIR / KCL Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on every joint *will also be running ACP for Iscycling storage zone*	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									
12.25"	9-5/8" 40# J-55 BTC	Fiby / Thirty Foot Gordon Shry / Gordon 5th Sand Bayard / Warren	2085 / 2182 2232 / 2272 2515 2581 / 2591	2157 / 2200 2272 / 2385 2527 2601 / 2631	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 final 2 joints then every third joint to 100' from surface	Once casing is at setting depth, Circulate and condition must at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.395" wall thickness Burst=3650 psi									
8.5" Vertical	5-1/2" 23# P-110 HP CDC HTQ	Speascheley Balltown Benson	3204 3438 4505	3224 3448 4525	9.0ppg SOBM	Lead: 14.5 ppg POZPNE-1 + 0.5% bwoc R3 + 1% bwoc EC1 + 0.75 gal/gal FP-13L + 0.5% bwoc MPY170 Tail: 14.8 ppg PNE-1 + 0.5% bwoc R3 + 0.75 gal/gal FP-13L + 50% bwoc ASCA1 + 0.5% bwoc MPY170 Lead Yield=1.19 Tail Yield=1.04 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=18240 psi Note: Actual centralizer schedules may be changed due to hole conditions									
8.5" Curve	5-1/2" 23# P-110 HP CDC HTQ	West River Buckell	6751 6854	6783 6864	11.5ppg SOBM 12.5ppg SOBM		Run 1 spiral centralizer every 3 joints from the top of the curve to the 1st 5.5" long joint to the top of the curve.											
8.5" Lateral	5-1/2" 23# P-110 HP CDC HTQ	Tully Limestone Hamilton Marcellus TMD / TVD (Production) Onondaga	6864 6872 7081 7260 7262 7262	6864 6872 7081 7260 7262 7262	11.5ppg SOBM 12.5ppg SOBM													



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LP @ 7282' TVD / 7714' MD  
8.5" Hole - Cemented Long String  
5-1/2" 23# P-110 HP CDC HTQ  
+4-16175' R Lateral  
TD @ 4-7252' TVD  
+4-23889' MD  
X=centralizers



FILE NO: 06-36-12-G-H-19  
 DRAWING NO: 1206 S-8H 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: November 19, 2019  
 OPERATOR'S WELL NO. 1206 S-8H  
 API WELL NO  
 47 - 033 -  
 STATE COUNTY PERMIT

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

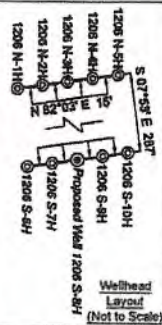
LOCATION: ELEVATION: 1,380' WATERSHED: Middle West Fork Creek  
 DISTRICT: Grant QUADRANGLE: West Milford  
 SURFACE OWNER: Antonio P., LLC COUNTY: Harrison  
 ROYALTY OWNER: C. Earl Snider, et al ACREAGE: 233.95  
 LEASE NO: ACREAGE: 233.66  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,252' TVD 23,889' 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

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 WV Department of Environmental Protection  
 AN 07 2020

HG Energy II Appalachia, LLC  
Well No. 1206 S-8H

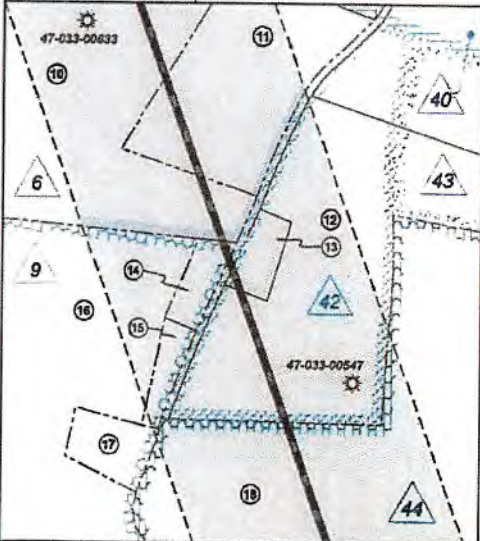
Page 2 of 3



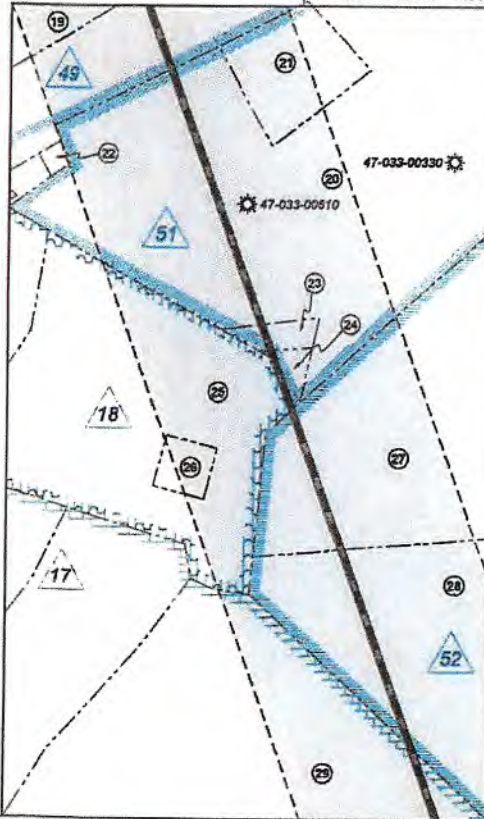
Wellhead Layout (Not to Scale)

- Legend**
- ⊙ Proposed gas well
  - ⊕ Well Reference, as noted
  - ⊗ Monument, as noted
  - ⊙ Existing Well, as noted
  - ⊗ Existing Plugged Well, as noted
  - ⊙ Digitized Well, as noted
  - Surface boundary (approx.)
  - - - Interior surface tracts (approx.)
  - - - Creek or Drain
  - - - Existing Road

Detail 1 - Scale: 1" = 500'



Detail 2 - Scale: 1" = 500'



FILE NO: 06-36-12-G-H-19  
DRAWING NO: 1206 S-8H 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: November 19, 2019  
OPERATOR'S WELL NO. 1206 S-8H  
API WELL NO  
47 - 033 -  
STATE COUNTY PERMIT

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

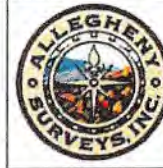
LOCATION: ELEVATION: 1,350' WATERSHED: Middle West Fork Creek  
DISTRICT: Grant QUADRANGLE: West Milford  
SURFACE OWNER: Antonio P., LLC COUNTY: Harrison  
ROYALTY OWNER: C. Earl Snider, et al ACREAGE: 233.35  
PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,252' TVD  
7,252' TVD  
23,889' MD

WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White  
ADDRESS: 6260 Dupont Road ADDRESS: 6260 Dupont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101

WV Department of Environmental Protection  
 Office of Oil and Gas  
 JAN 07 2020

HG Energy II Appalachia, LLC  
Well No. 1206 S-8H

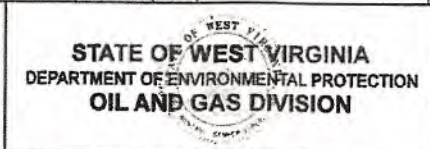
Page 3 of 3



Harrison County - Grant Outside District			
No.	TM / Par	Owner	Bk / Pg Ac.
1	426 / 71	Antonio P., LLC	1503 / 291 233.35
2	429 / 72	Charles R. & Franklin L. Sutton	1301 / 98 30.00
3	426 / 63	Charles R. & Franklin L. Sutton	1301 / 98 51.33
4	426 / 73	Charles R. & Franklin L. Sutton	1301 / 98 22.96
5	446 / 4	Bob R. Blankenship	1510 / 750 27.67
6	446 / 3	Antonio P., LLC	1503 / 291 200.00
7	446 / 1	Antonio P., LLC	1503 / 291 24.10
8	446 / 2	Antonio P., LLC	1503 / 291 43.90
9	446 / 23	Ann A. & William S. Davison	1466 / 431 21.46
10	446 / 19	Mary Richards	W118 / 904 52.72
11	446 / 36	Mary Richards	W118 / 904 10.28
12	446 / 23.3	Greg G. & Cathy L. Burnside	1465 / 84 19.35
13	446 / 21	Greg G. & Cathy L. Burnside	1219 / 842 1.21
14	446 / 33.3	Daniel P. & Janet M. Loudin	1414 / 1177 1.13
15	446 / 33.2	Yvonne A. Dutchess	1337 / 527 0.93
16	446 / 33	Ralph G. Davison	1023 / 777 60.00
17	446 / 33.1	Jason R. & Angelle L. Jarratt	1023 / 774 1.71
18	446 / 34	David & Daniel Curry	1451 / 967 97.41
19	446 / 43	Gregory & Daphne McWorther	W191 / 23 39.80
20	466 / 17	Charles R. & Franklin L. Sutton	965 / 542 43.36
21	446 / 50	Bonita V. Hill	1540 / 598 3.84
22	466 / 17.5	United International Inc.	1216 / 516 0.19
23	466 / 17.4	All-In-EI Farms, LLC	1564 / 421 0.58
24	466 / 17.3	All-In-EI Farms, LLC	1564 / 125 0.28
25	466 / 16	Charles R. & Franklin L. Sutton	715 / 178 23.25
26	466 / 15.1	W.J. Sutton	1291 / 1179 0.92
27	466 / 18	Charles R. & Franklin L. Sutton	1420 / 1107 82.50
28	466 / 36	Charles R. & Franklin L. Sutton	1401 / 913 50.00
29	466 / 35	Frank N. Wine Jr & III	1596 / 809 60.00
30	466 / 34	Frank N. Wine Jr & III	1596 / 809 27.46
31	466 / 38	Charles R. & Franklin L. Sutton	1342 / 1173 123.00
32	466 / 33	Frank N. Wine Jr & III	1596 / 809 13.75
33	466 / 54	Frank N. Wine Jr & III	1596 / 809 11.04
34	466 / 55	Charles R. & Franklin L. Sutton	--- / --- 20.00
35	466 / 70.1	Steven A. Shock Estate	1292 / 1067 5.00
36	466 / 53	Frank N. Wine Jr & III	1596 / 809 55.00
37	466 / 70	Frank N. Wine Jr & III	1596 / 809 114.77
Lewis County - Hackers Creek District			
No.	TM / Par	Owner	Bk / Pg Ac.
38	9C / 35	S. Thomas Bond, et ux	577 / 328 263.45
39	9C / 40	Rose A. Kolb & John Hunter	W17 / 496 101.25
40	9C / 39	Rose A. Kolb & John Hunter	W17 / 496 81.51

ID	Lessee
1	C. Earl Snider, et al
2	Creed W Snider, et al
6	Nora A. Davison, et al
9	Nora A. Davison, et al
17	Idon McWhorter, et al
18	Mabel Ann West
21	Cora B. Reed, et al
22	Emma Wagoner, et al
23	Stanley Yechym, et al
27	H.A. Boylen, et al
29	Fleming Howell, et al
32	Alton Bell, et al
33	Alton Bell
36	Lloyd Stout, et al
40	L.B. Davison
42	Maude Davison, et al
43	Maude Davison, et al
44	Lucy Davison
49	J.C. McWhorter, et al
51	Paul A. Davison, et al
52	N.A. McWhorter, et al
56	Sopha McWhorter, et al
58	J.W.C. Kolb, et al
59	J.W.C. Kolb, et ux
N26	Marcella R. Bond, et al

FILE NO: 06-36-12-G-H-10  
DRAWING NO: 1206 S-8H Well Plat  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY:  
Submeter  
PROVEN SOURCE OF ELEVATION:  
CORS, Bridgeport, WV



DATE: November 19, 2019  
OPERATOR'S WELL NO. 1206 S-8H  
API WELL NO  
47 - 033 -  
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,350' WATERSHED: Middle West Fork Creek  
DISTRICT: Grant QUADRANGLE: West Milford  
SURFACE OWNER: Antonio P., LLC COUNTY: Harrison  
ROYALTY OWNER: C. Earl Snider, et al LEASE NO: ACREAGE: 233.35  
ACREAGE: 233.66

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
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 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,252' TVD 23,869' MD

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ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101 Parkersburg, WV 26101

WV Department of Environmental Protection  
AN 07 2023

Office of Oil and Gas

WW-6B  
(04/15)

API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. Antonio 1206 S-8H  
Well Pad Name: Antonio 1206

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

- 1) Well Operator: HG Energy II Appalachia, LLC 494519932 Harrison Grant West Milford 7.5'  
Operator ID County District Quadrangle
- 2) Operator's Well Number: Antonio 1206 S-8H Well Pad Name: Antonio 1206
- 3) Farm Name/Surface Owner: HG Energy II Appalachia, LLC Public Road Access: Hackers Creek Rd @ SR 19
- 4) Elevation, current ground: 1364' Elevation, proposed post-construction: 1350'
- 5) Well Type (a) Gas  Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_  
Other \_\_\_\_\_  
(b) If Gas Shallow  Deep \_\_\_\_\_  
Horizontal
- 6) Existing Pad: Yes or No No *SAW 12/4/2019*
- 7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus at 7081' / 7260' and 179' in thickness. Anticipated pressure at 4314#.
- 8) Proposed Total Vertical Depth: 7252'
- 9) Formation at Total Vertical Depth: Marcellus
- 10) Proposed Total Measured Depth: 23,889'
- 11) Proposed Horizontal Leg Length: 16,175'
- 12) Approximate Fresh Water Strata Depths: 135', 480', 637', 731'
- 13) Method to Determine Fresh Water Depths: Nearest offset well data
- 14) Approximate Saltwater Depths: NA
- 15) Approximate Coal Seam Depths: 623', 1010' to 1015'
- 16) Approximate Depth to Possible Void (coal mine, karst, other): None
- 17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes \_\_\_\_\_ No
- (a) If Yes, provide Mine Info: Name: \_\_\_\_\_  
Depth: \_\_\_\_\_  
Seam: \_\_\_\_\_  
Owner: \_\_\_\_\_



WW-6B  
(04/15)

API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. Antonio 1206 S-8H  
Well Pad Name: Antonio 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	1100'	1100'	40% excess, CTS
Intermediate 1	13 3/8"	NEW	J-55	68	2200'	2200'	40% excess, CTS
Intermediate 2	9 5/8"	NEW	J-55	40	3000'	3000'	40% excess tail, CTS
Production	5 1/2"	NEW	P-110	23	23889'	23889'	20% excess tail, CTS
Tubing							
Liners							

SDW  
12/14/2019

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	30"	.500				Drilled In
Fresh Water/Coal	20"	24"	.438	2110	1200	Type 1, Class A	40% excess yield = 1.20, CTS
Intermediate 1	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	Least 40% excess, Tail 0% excess
Intermediate 2	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	Least 40% excess, Tail 0% excess
Production	5 1/2"	8 1/2"	.415	16240	12500	Type 1/Class A	20% excess yield = 1.15, tail yield = 0.15
Tubing							
Liners							

**PACKERS**

Kind:				
Sizes:				
Depths Set:				

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WV Department of  
Environmental Protection

WW-6B  
(10/14)

API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. Antonio 1206 S-8H  
Well Pad Name: Antonio 1206

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 7252 feet. Drill horizontal leg to estimated 16,175' lateral length, 23,889' 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): 68.187 acres

22) Area to be disturbed for well pad only, less access road (acres): 11.058 acres

23) Describe centralizer placement for each casing string:

No centralizers will be used with completion casing.  
Production - install every 8 joints in section.  
Drill pipe - install every 8 joints in section.  
Drill pipe - install every 8 joints in section.  
Production - install every 8 joints in section.  
Production - install every 8 joints in section.

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

Cement Additives - See attached to well Data Sheet file.  
Fresh Water - 100 gal PWS-1 + 200 lbs Cement, 400 lbs Cement Yield = 1,000 GTS  
Intermediate 1 - 100 gal PWS-1 + 200 lbs Cement, 400 lbs Cement Yield = 1,000 GTS  
Intermediate 2 - 100 gal PWS-1 + 200 lbs Cement, 400 lbs Cement Yield = 1,000 GTS  
Production - 100 gal PWS-1 + 200 lbs Cement, 400 lbs Cement Yield = 1,000 GTS

25) Proposed borehole conditioning procedures:

Conditioner - Remove the hole to phase at TD.  
Fresh Water - Clean the hole to TD, stimulate a minimum of one hole volume with Fresh Water prior to pumping cement.  
Drill - Clean the hole to TD, stimulate a minimum of one hole volume with Fresh Water prior to pumping cement.  
Production - Clean the hole to TD, stimulate a minimum of one hole volume with Fresh Water prior to pumping cement.

\*Note: Attach additional sheets as needed.

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WV Department of  
Environmental Protection

47 03 305985

WW-9  
(4/16)

API Number 47 - \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. Antonio 1206 S-8H

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  
12/4/2019*

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, SOB, 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

AN 07 2020

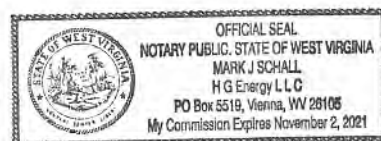
Subscribed and sworn before me this 23rd day of October, 2019

*[Signature]*

Notary Public

My commission expires 11/2/2021

WV Department of  
Environmental Protection



HG Energy II Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 68.187 Prevegetation pH

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount 500 lbs/acre

Mulch Hay 2 Tons/acre

Seed Mixtures

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

Maintain E&S controls through the drilling and completion process

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: S. J. Ward III

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

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

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WV Department of Environmental Protection

Title: Oil & Gas Inspector Date: 12/4/2019

Field Reviewed? (X) Yes ( ) No

## Cuttings Disposal/Site Water

### Cuttings -Haul off Company:

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

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

Environmental Coordination Services & Recycling (ECS&R)  
3287 US Highway 19  
Cochranon, PA 16314  
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  
724-929-7894

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

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

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

Waste Management Kelly Run Permit # 100568  
1901 Park Side Drive  
Elizabeth, PA 15037  
412-384-7569

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

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

Waste Management Meadowfill Permit # 1032  
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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WV Department of  
Environmental Protection

## Cuttings Disposal/Site Water

### Cuttings -Haul off Company:

Eap Industries, Inc. DOT # 0876278  
1875 Smith Two State Rd. Atlasburg, PA 15004  
1-888-284-5227

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

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

### Disposal Locations:

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

Westmoreland Waste, LLC Permit # 100277  
111 Conner Lane  
Belle Vernon, PA 15012  
724-929-7884

Sycamore Landfill Inc. Permit #R30-078001 05-2010  
4301 Sycamore Ridge Road  
Hurricane, WV 25526  
304-562-2611

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

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

Waste Management Kelly Run Permit # 100668  
1901 Park Side Drive  
Elizabeth, PA 15037  
412-884-7569

Waste Management South Hills (Arnoni) Permit # 100592  
3100 Hill Road  
Liberty, 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 # SWR-108-87 / WV 0109029  
Rd 2 Box 410  
Colliers, WV 26035  
304-748-0014

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WV Department of  
Environmental Protection

Wetzel County Landfill Permit # SWF-1021-97 / WV 0105185  
 Rt 1, Box 156A  
 New Martinsville, WV 26035  
 804-455-3800

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

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

Northern A-1 Environmental Services Permit ID 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  
 330-892-0164

Nabors Completion & Production Services Co.  
 PO Box 976682  
 Dallas, TX 75397-5682

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

Nuverra Environmental Solutions  
 11942 Veterans Memorial Highway  
 Masontown, WV 26542

Mustang Oilfield Services LLC  
 PO Box 799  
 St. Clairsville, OH 43950

Wilson's Outdoor Services, LLC  
 458 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  
 Lowellville, OH 44436  
 330-536-6825

Adams #1 (Buckeye Brine, LLC)  
 Permit # 34-031-2-7177  
 23988 Airport Road  
 Coshocton, OH 43812  
 740-575-4484  
 512-478-6545

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

Force, Inc.  
 1380 Rte. 286 Hwy. E, Suite 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 15632

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

Nichols 1-A (SWIW #18)  
 Permit # 3862  
 300 Cherrington Pkwy, Suite 200  
 Coraopolis, PA 15108  
 412-829-7275

Grosella (SWIW #34)  
 Permit # 4096  
 Rt. 88  
 Garrattsville, OH  
 718-278-4816

Kerrble L-D Well  
 Permit # 8780  
 7675 East Pike  
 Norwich, OH 43767  
 614-648-8898  
 740-786-6495

WV Department of  
 Environmental Protection

AN 07 2020

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Adams #2 (Buckeye Brine, LLC)  
2205 Westover Road  
Austin Tx 78708  
Permit # 84-081-2-7178  
740-575-4484  
512-478-6545

Adams #3 (Buckeye Brine, LLC)  
Permit #84-081-2-7241-00-00  
2680 Exposition, Suite 117  
Austin, TX 78708  
512-478-6545

Mazana #1 Well (SWIW # 18)  
Permit # 84-157-2-5511-00-00  
5867 E. State Street  
Newcomerstown, OH 43882  
740-768-3966

Goff SWD #1 (SWIW # 27)  
Permit # 84-119-2-8776-000  
300 Cherrington Pkwy, Suite 200  
Coraopolis, PA 15108  
412-828-7275

SOS D#1 (SWIW #12)  
Permit # 84-059-2-4202-00-00  
Silcor Oilfield Services, Inc.  
2999 Hubbard Road  
Youngstown, OH 44505

Dudley #1 UIC (SWIW #1)  
Permit # 84-121-2-2458-00-00  
Select Energy Services, LLC  
7884 S. Pleasants Hwy  
St. Marys, WV 26170  
804-665-2652

OH UIC #1 Bu keya UIC Barneaville 1 & 2  
CNX Gas Company, LLC  
1000 Consoil Energy Drive  
Permit # 84-013-2-0609-00-00  
Permit # 84-013-2-0614-00-00  
804-828-6868

US Steele 1.1385  
Permit # 47-001-00361  
200 Evergreen Drive  
Waynesburg, PA 15780  
804-828-6868

Chapin #7 UIC (SWIW #7)  
Permit # 84-083-2-4187-00-00  
Elkhead Gas & Oil Company  
12188 Marna Rd. NE  
Newark, OH 43055  
740-768-3966

RECEIVED  
Office of Oil and Gas  
JAN 07 2020  
WV Department of  
Environmental Protection

*[Handwritten signatures and notes]*



# **HG Energy II Appalachia, LLC**

## **Site Safety Plan**

**Antonio 1206 Well Pad  
5279 Duck Creek Road Lost Creek  
Harrison County, WV 26385**

**September 2019: Version 1**

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

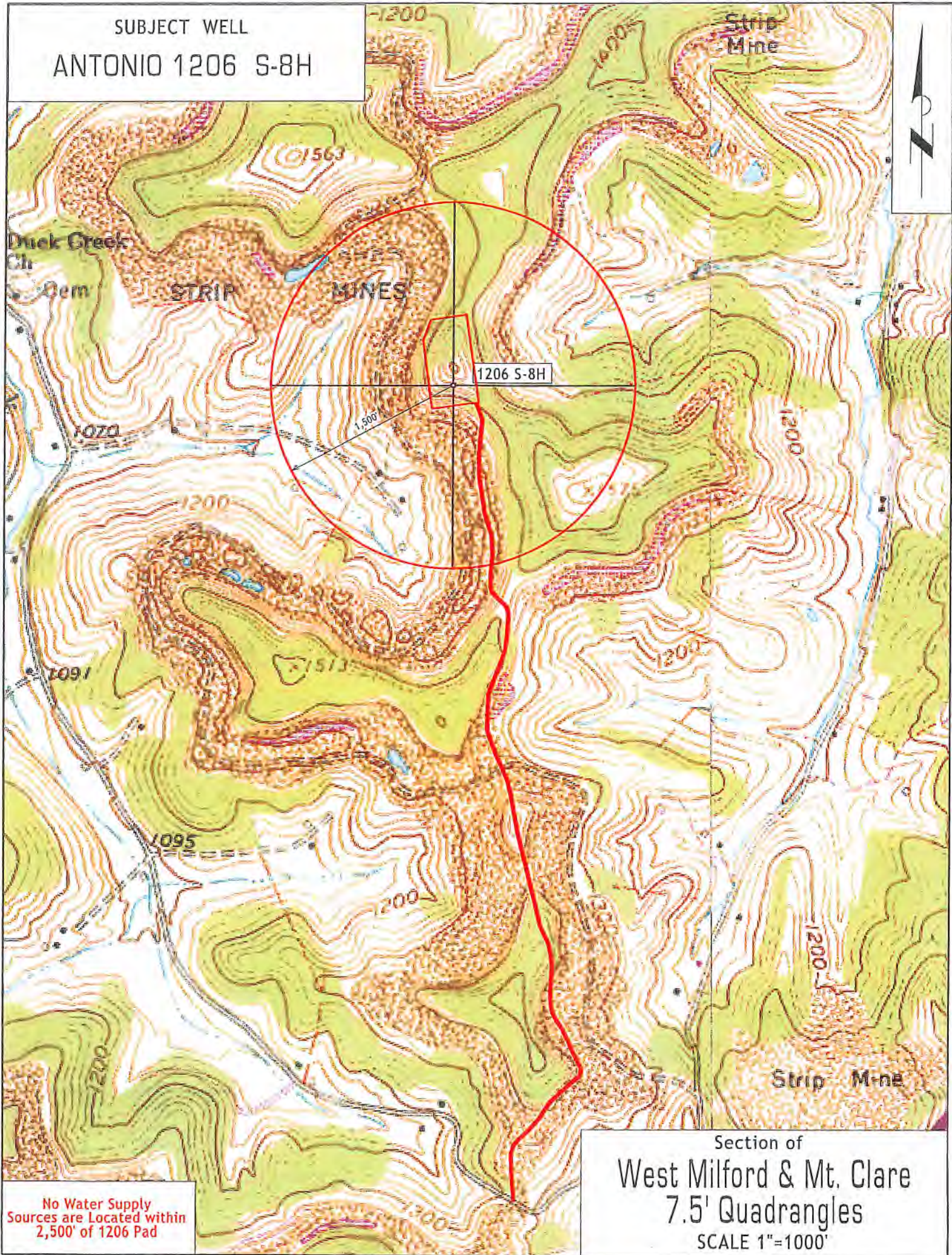
**HG Energy II Appalachia, LLC**

**5260 Dupont Road**

**Parkersburg, WV 26101**

**RECEIVED**  
**Office of Oil and Gas**  
**SEP 07 2020**  
WV Department of  
Environmental Protection

SUBJECT WELL  
ANTONIO 1206 S-8H



No Water Supply Sources are Located within 2,500' of 1206 Pad

Section of  
West Milford & Mt. Clare  
7.5' Quadrangles  
SCALE 1"=1000'

HG Energy II Appalachia, LLC  
Well No. 1206 S-8H

Page 1 of 3

Proposed Well 1206 S-8H

Tag	Bearing	Dist.	Description
L1	N 80°25' W	3,389.5'	5/8" Rebar
L2	N 63°13' E	1,419.8'	47-033-00629
L3	S 83°31' E	2,963.6'	1" Iron pipe
L4	S 62°27' E	1,685.2'	47-033-01215
L5	S 63°54' E	878.4'	Landing point

Notes:  
Well No. 1206 S-8H  
UTM NAD 1983 (USSF)  
Top Hole Coordinates  
N: 14,220,499.95'  
E: 1,815,543.84'  
Landing Point Coordinates  
N: 14,220,113.52'  
E: 1,816,332.67'  
Bottom Hole Coordinates  
N: 14,204,939.55'  
E: 1,821,916.30'

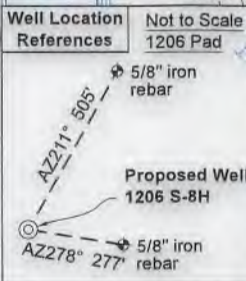
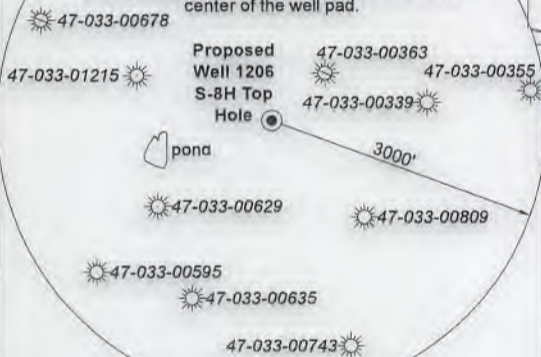
Notes: Well No. 1206 S-8H  
West Virginia Coordinate System of 1927, North Zone  
based upon Differential GPS Measurements.

Top Hole coordinates Latitude: 39°09'26.04" Longitude: 80°22'56.56"	Bottom Hole coordinates Latitude: 39°06'51.75" Longitude: 80°21'37.03"
---	--

UTM Zone 17, NAD 1983  
Top Hole Coordinates  
N: 4,334,417.054m  
E: 553,378.869m  
Bottom Hole Coordinates  
N: 4,329,674.234m  
E: 555,321.199m

Plat orientation and corner and well references  
are based upon the grid north meridian.  
Well location references are based upon  
the magnetic meridian.

Note: 1 Pond and Zero 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.



FILE NO: 06-36-12-G-H-19

DRAWING NO: 1206 S-8H 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: November 19 20 19

OPERATOR'S WELL NO. 1206 S-8H

API WELL NO

47 - 033 - 05985  
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,350' WATERSHED: Middle West Fork Creek

DISTRICT: Grant

SURFACE OWNER: Antonio P., LLC

ROYALTY OWNER: C. Earl Snider, et al

LEASE NO: ACREAGE: 233.66

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

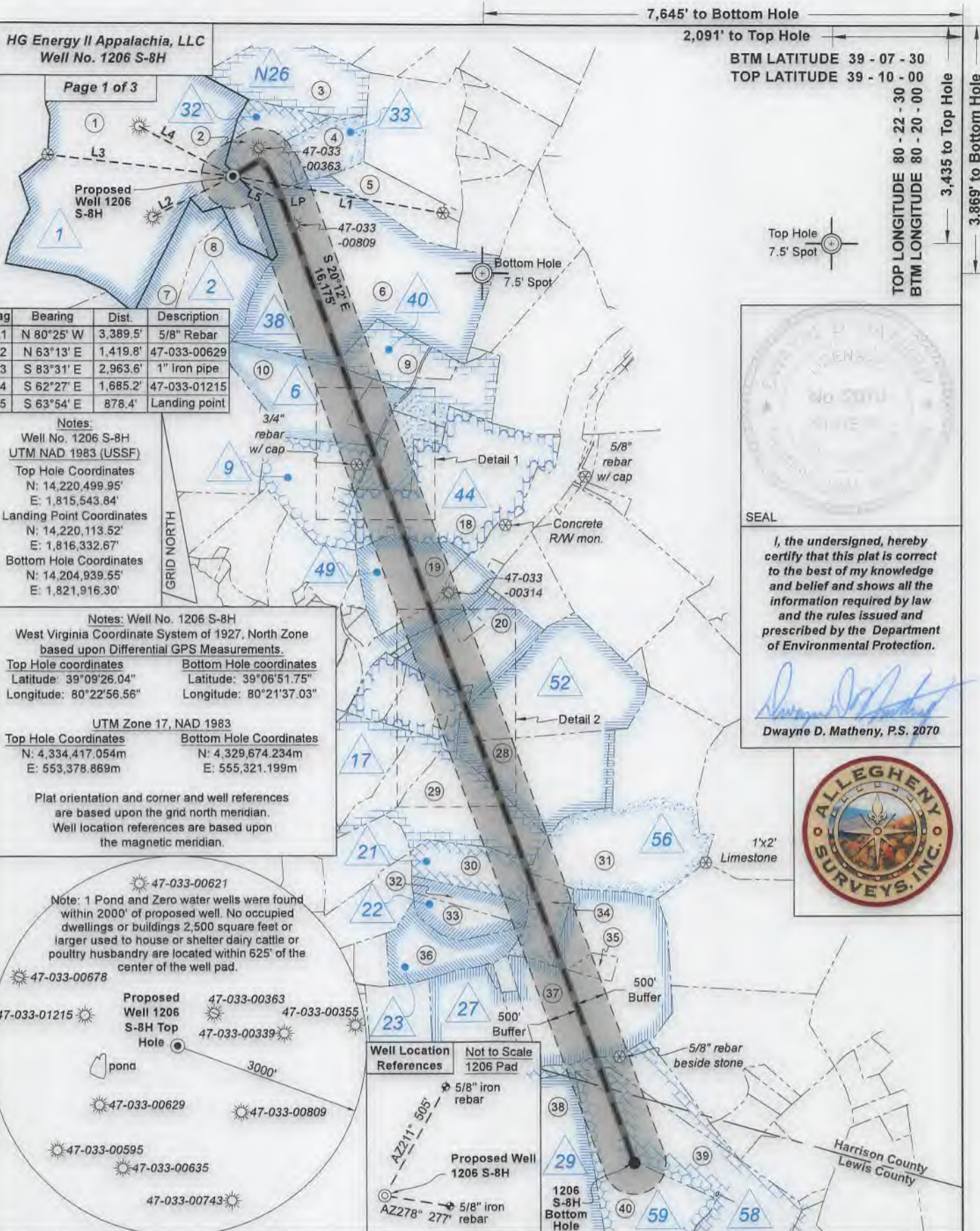
PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 23,889' MD

WELL OPERATOR: HG Energy II Appalachia, LLC

DESIGNATED AGENT: Diane C. White

ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101

ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101



7,645' to Bottom Hole

2,091' to Top Hole

BTM LATITUDE 39 - 07 - 30

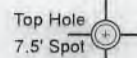
TOP LATITUDE 39 - 10 - 00

TOP LONGITUDE 80 - 22 - 30

BTM LONGITUDE 80 - 20 - 00

3,435 to Top Hole

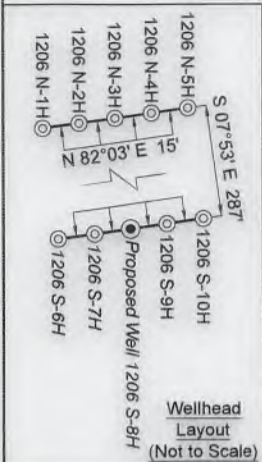
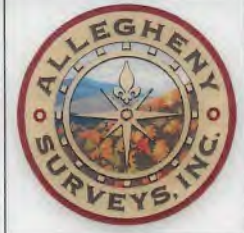
3,869' to Bottom Hole



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



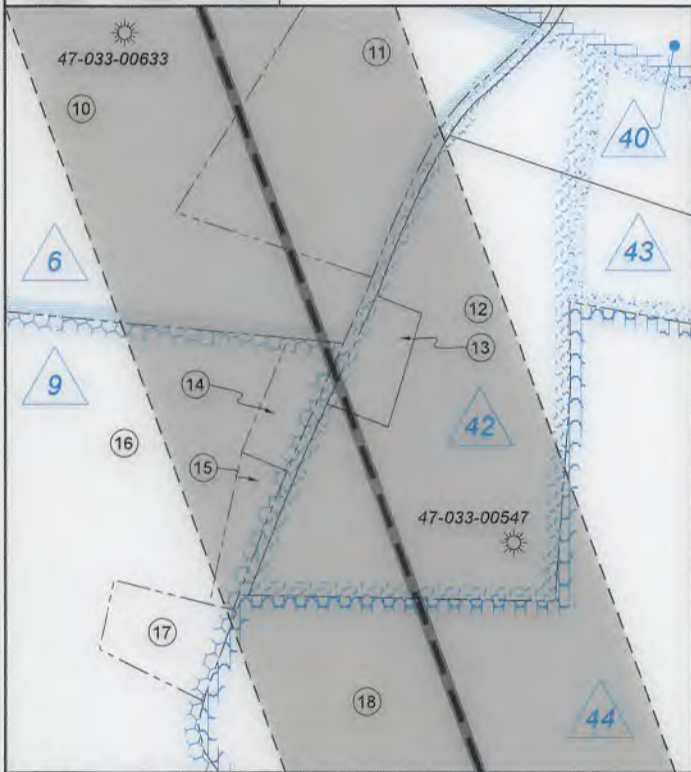


Wellhead  
Layout  
(Not to Scale)

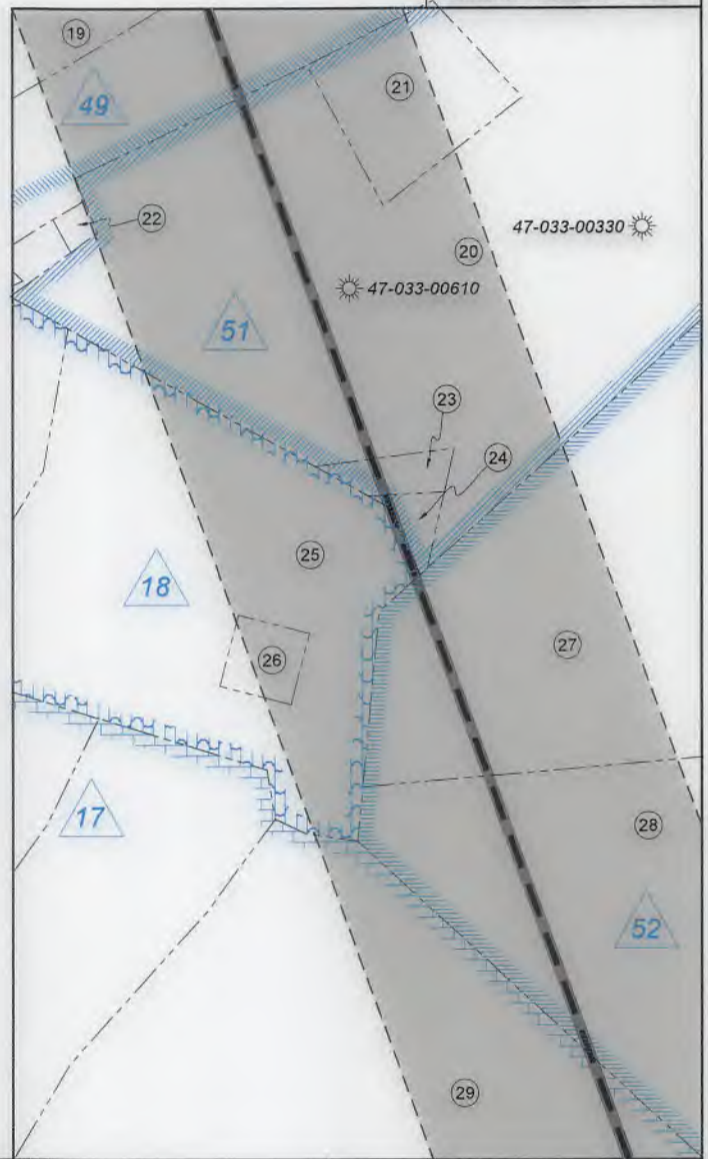
Legend

- ⊙ Proposed gas well
- ⊕ Well Reference, as noted
- ⊗ Monument, as noted
- ☀ Existing Well, as noted
- ☀ Existing Plugged Well, as noted
- ☀ Digitized Well, as noted
- Surface boundary (approx.)
- - - Interior surface tracts (approx.)
- - - Creek or Drain
- - - Existing Road

Detail 1 - Scale: 1" = 500'



Detail 2 - Scale: 1" = 500'



FILE NO: 06-36-12-G-H-19

DRAWING NO: 1206 S-8H 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: November 19 20 19

OPERATOR'S WELL NO. 1206 S-8H

API WELL NO

47 - 033 - 05985  
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,350' WATERSHED: Middle West Fork Creek

QUADRANGLE: West Milford

DISTRICT: Grant

COUNTY: Harrison

SURFACE OWNER: Antonio P., LLC

ACREAGE: 233.35

ROYALTY OWNER: C. Earl Snider, et al

LEASE NO: \_\_\_\_\_ ACREAGE: 233.66

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: 23,889' MD 7,252' TVD

WELL OPERATOR: HG Energy II Appalachia, LLC

DESIGNATED AGENT: Diane C. White

ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101

ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101



Harrison County - Grant Outside District

No.	TM / Par	Owner	Bk / Pg	Ac.
1	426 / 71	Antonio P., LLC	1503 / 291	233.35
2	426 / 72	Charles R. & Franklin L. Sutton	1301 / 98	30.00
3	426 / 63	Charles R. & Franklin L. Sutton	1301 / 98	51.33
4	426 / 73	Charles R. & Franklin L. Sutton	1301 / 98	22.96
5	446 / 4	Bob R. Blankenship	1310 / 750	27.67
6	446 / 3	Antonio P., LLC	1503 / 291	200.00
7	446 / 1	Antonio P., LLC	1503 / 291	24.10
8	446 / 2	Antonio P., LLC	1503 / 291	43.90
9	446 / 23	Ann A. & William S. Davisson	1466 / 431	21.46
10	446 / 19	Mary Richards	W118 / 904	52.72
11	446 / 36	Mary Richards	W118 / 904	10.28
12	446 / 23.3	Greg G. & Cathy L. Burnside	1465 / 84	19.35
13	446 / 21	Greg G. & Cathy L. Burnside	1219 / 842	1.21
14	446 / 33.3	Daniel P. & Janet M. Loudin	1414 / 1177	1.13
15	446 / 33.2	Yvonne A. Dutchess	1337 / 527	0.93
16	446 / 33	Ralph G. Davisson	1023 / 777	50.00
17	446 / 33.1	Jason R. & Angelee L. Jarrett	1023 / 774	1.71
18	446 / 34	David & Daniel Curry	1451 / 987	97.41
19	446 / 43	Gregory & Daphine McWorther	W191 / 23	39.80
20	466 / 17	Charles R. & Franklin L. Sutton	968 / 542	43.38
21	446 / 50	Bonita V. Hitt	1540 / 598	3.84
22	466 / 17.5	United International Inc.	1216 / 518	0.19
23	466 / 17.4	All-In-El Farms, LLC	1564 / 421	0.58
24	466 / 17.3	All-In-El Farms, LLC	1564 / 125	0.28
25	466 / 16	Charles R. & Franklin L. Sutton	715 / 178	23.25
26	466 / 16.1	W.J. Sutton	1291 / 1170	0.92
27	466 / 18	Charles R. & Franklin L. Sutton	1420 / 1107	82.50
28	466 / 36	Charles R. & Franklin L. Sutton	1401 / 913	50.00
29	466 / 35	Frank N. Wine Jr & III	1596 / 809	60.00
30	466 / 34	Frank N. Wine Jr & III	1596 / 809	27.46
31	466 / 38	Charles R. & Franklin L. Sutton	1342 / 1173	123.00
32	466 / 33	Frank N. Wine Jr & III	1596 / 809	13.75
33	466 / 54	Frank N. Wine Jr & III	1596 / 809	11.04
34	466 / 55	Charles R. & Franklin L. Sutton	--- / ---	20.00
35	466 / 70.1	Steven A. Shock Estate	1292 / 1067	5.00
36	466 / 53	Frank N. Wine Jr & III	1596 / 809	55.00
37	466 / 70	Frank N. Wine Jr & III	1596 / 809	114.77

Lewis County - Hackers Creek District

No.	TM / Par	Owner	Bk / Pg	Ac.
38	9C / 35	S. Thomas Bond, et ux	577 / 328	283.45
39	9C / 40	Rose A. Kolb & John Hunter	W17 / 496	101.25
40	9C / 39	Rose A. Kolb & John Hunter	W17 / 496	81.51

ID	Lease
1	C. Earl Snider, et al
2	Creed W. Snider, et al
6	Nora A. Davisson, et al
9	Nora A. Davisson, et al
17	Iden McWhorter, et al
18	Mabel Ann West
21	Cora B. Reed, et al
22	Emma Waggoner, et al
23	Stanley Yochym, et al
27	H.A. Boylen, et al
29	Fleming Howell, et al
32	Alton Bell, et al
33	Alton Bell
38	Lloyd Stout, et al
40	L.B. Davisson
42	Maude Davisson, et al
43	Maude Davisson, et al
44	Lucy Davisson
49	J.C. McWhorter, et al
51	Paul A. Davisson, et al
52	N.A. McWhorter, et al
56	Sopha McWhorter, et al
58	J.W.C. Kolb, et al
59	J.W.C. Kolb, et ux
N26	Marcella R. Bond, et al

FILE NO: 06-36-12-G-H-19

DRAWING NO: 1206 S-8H 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: November 19 20 19

OPERATOR'S WELL NO. 1206 S-8H

API WELL NO

47 - 033 - 05985

STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,350' WATERSHED: Middle West Fork Creek

QUADRANGLE: West Milford

DISTRICT: Grant

COUNTY: Harrison

SURFACE OWNER: Antonio P., LLC

ACREAGE: 233.35

ROYALTY OWNER: C. Earl Snider, et al

LEASE NO: ACREAGE: 233.66

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

PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,252' TVD  
23,889' MD

WELL OPERATOR: HG Energy II Appalachia, LLC

DESIGNATED AGENT: Diane C. White

ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101

ADDRESS: 5260 Dupont Road  
Parkersburg, WV 26101

EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:

**ANTONIO 1206 SOUTH UNIT AND PROPOSED WELLS S-6H, S-7H, S-8H, S-9H and S-10H.**

GT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4703300038	HARRISON	B Swisher 2 CW417	Dominion Energy Transmission, Inc.	Gordon Stray	Storage	2350	ACTIVE	39.126611	-80.354494
2	4703300297	HARRISON	West	Dominion Energy Transmission, Inc.	Fifty-foot	Storage	1868	ACTIVE	39.135172	-80.374098
3	4703300301	HARRISON	John M McWhorter	Trio Petroleum Corporation	Hampshire Grp	Gas	2375	PLUGGED	39.129015	-80.376251
4	4703300306	HARRISON	A L West	Dominion Energy Transmission Inc.	Hampshire Grp	Gas	2340	ACTIVE	39.136607	-80.378501
5	4703300311	HARRISON	G Manley Curry	Dominion Energy Transmission, Inc.	Fifty-foot	Storage	2020	ACTIVE	39.139325	-80.362560
6	4703300313	HARRISON	A L West	Dominion Energy Transmission Inc.	Gantz	Storage	1956	ACTIVE	39.137413	-80.382384
7	4703300314	HARRISON	J M McWhorter	Dominion Energy Transmission, Inc.	Thirty-foot	Storage	2185	PLUGGED	39.139183	-80.370227
8	4703300325	HARRISON	Curry	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	1729	ACTIVE	39.143102	-80.362213
9	4703300330	HARRISON	P A Davison	Dominion Energy Transmission, Inc.	Gantz	Storage	1983	ACTIVE	39.136911	-80.367064
10	4703300339	HARRISON	Alton Bell CW-333	Dominion Energy Transmission, Inc.	Gantz	Storage	1959	ACTIVE	39.158620	-80.376275
11	4703300347	HARRISON	Herman Nixon	Dominion Energy Transmission, Inc.	not available	not available	-	ABANDONED	39.122387	-80.361419
12	4703300355	HARRISON	Fred H Smith CW-334	Dominion Energy Transmission, Inc.	Gantz	Storage	2012	ACTIVE	39.158950	-80.372286
13	4703300363	HARRISON	A Bell	Dominion Energy Transmission Inc.	Thirty-foot	Storage	2150	PLUGGED	39.158029	-80.381243
14	4703300399	HARRISON	L Davison	Dominion Energy Transmission, Inc.	Thirty-foot	Storage	2042	PLUGGED	39.144408	-80.364636
15	4703300547	HARRISON	Maude Davison	Dominion Energy Transmission, Inc.	Benson	Gas	4530	ACTIVE	39.144146	-80.372692
16	4703300579	HARRISON	Ode Bright	Dominion Energy Transmission Inc.	Benson	Gas	4595	ACTIVE	39.137253	-80.380576
17	4703300595	HARRISON	C E Snider	Dominion Energy Transmission Inc.	Benson	Gas	4620	ACTIVE	39.153667	-80.389060
18	4703300610	HARRISON	David H Nutter	Dominion Energy Transmission, Inc.	Benson	Gas	4412	ACTIVE	39.136470	-80.369890
19	4703300629	HARRISON	C Earl Snider	Dominion Energy Transmission Inc.	Thirty-foot	Storage	1949	ACTIVE	39.155591	-80.386677
20	4703300631	HARRISON	C E Hickman	Dominion Energy Transmission, Inc.	Thirty-foot	Storage	2094	ACTIVE	39.150163	-80.390145
21	4703300633	HARRISON	Flossie Davison	Dominion Energy Transmission, Inc.	Gordon	Storage	1814	ACTIVE	39.147967	-80.376397
22	4703300634	HARRISON	Nora Davison	Dominion Energy Transmission, Inc.	Fifty-foot	Gas	2072	ABANDONED	39.142236	-80.376677
23	4703300635	HARRISON	C W Snider CW231	Dominion Energy Transmission, Inc.	Gordon	Storage	1946	ACTIVE	39.152100	-80.386365
24	4703300639	HARRISON	Sophia McWhorter	Dominion Energy Transmission, Inc.	Thirty-foot	Storage	2121	ACTIVE	39.132963	-80.356778
25	4703300644	HARRISON	P M White	Dominion Energy Transmission, Inc.	Thirty-foot	Storage	1825	ACTIVE	39.129169	-80.380402
26	4703300645	HARRISON	N A McWhorter	Dominion Energy Transmission, Inc.	Thirty-foot	Storage	2050	ACTIVE	39.131083	-80.362021
27	4703300650	HARRISON	S McWhorter CW312	Dominion Energy Transmission, Inc.	Fifty-foot	Storage	1892	ACTIVE	39.128533	-80.363342
28	4703300651	HARRISON	Allen M Dyer CW320	Dominion Energy Transmission, Inc.	Fifty-foot	Storage	2050	ACTIVE	39.139952	-80.364713
29	4703300725	HARRISON	W E Ware CW325	Dominion Energy Transmission, Inc.	Fifty-foot	Storage	1985	ACTIVE	39.142666	-80.360350
30	4703300743	HARRISON	Petitto Brothers Inc	Dominion Energy Transmission, Inc.	Thirty-foot	Storage	1988	ACTIVE	39.151385	-80.379306
31	4703300765	HARRISON	L Gifford CW331	Dominion Energy Transmission, Inc.	Fifth	Storage	2495	PLUGGED	39.154858	-80.368549
32	4703300782	HARRISON	H Kieffer CW229	Dominion Energy Transmission, Inc.	Fifty-foot	Storage	2089	ACTIVE	39.146248	-80.383657

33	4703300784	HARRISON	Maxon Boylen	Dominion Energy Transmission, Inc.	Benson	Gas	4421	ACTIVE	39.124641	-80.362284
34	4703300789	HARRISON	Charles R Sutton	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4579	ACTIVE	39.141189	-80.362910
35	4703300808	HARRISON	Lloyd Stout CW330	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Storage	2160	ACTIVE	39.152853	-80.372851
36	4703300809	HARRISON	Lloyd Stout CW234	Dominion Energy Transmission, Inc.	Mid Devonian	not available	4793	PLUGGED	39.155225	-80.378746
37	4703300826	HARRISON	N A McWhorter	Dominion Energy Transmission, Inc.	Benson	Storage	4400	ACTIVE	39.130759	-80.365169
38	4703300872	HARRISON	L Prince CW213	Dominion Energy Transmission, Inc.	Thirty-foot	Storage	1974	ACTIVE	39.131201	-80.378911
39	4703302157	HARRISON	N E Davison	Dominion Energy Transmission, Inc.	Brallier	Gas	4989	ACTIVE	39.148180	-80.378194
40	4703302163	HARRISON	N McWhorten	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.134829	-80.360453
41	4703302342	HARRISON	N A McWhorter	Dominion Energy Transmission, Inc.	Benson	Gas	4440	ACTIVE	39.132628	-80.364331
42	4703304027	HARRISON	Jack Shock etux 2	Ross & Wharton Gas Company, Inc.	Benson	Gas	4400	ACTIVE	39.125018	-80.377732
43	4703304058	HARRISON	Jack Shock etux 3	Ross & Wharton Gas Company, Inc.	Greenland Gap Fm	Gas	5102	ACTIVE	39.127194	-80.373262
44	4703304634	HARRISON	Rudy L McWhorter	Dominion Energy Transmission, Inc.	Benson	Gas	4551	ACTIVE	39.140605	-80.374607
45	4703304742	HARRISON	Robert Nelson Rector	Dominion Energy Transmission, Inc.	Hampshire Grp	not available	3183	PLUGGED	39.148072	-80.368972
46	4703304802	HARRISON	Vernon D Cochran Jr	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4641	ACTIVE	39.120647	-80.356801
47	4703304803	HARRISON	Chas R/F L Sutton	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4426	ACTIVE	39.122550	-80.352193
48	4703304813	HARRISON	Charles R & Franklin L Sutton	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4440	ACTIVE	39.128841	-80.360416
49	4703305562	HARRISON	William F & Mary A Reel	Dominion Energy Transmission, Inc.	Benson	Gas	4600	ACTIVE	39.133568	-80.380312
50	4703305736	HARRISON	Rudy L McWhorter	Dominion Energy Transmission, Inc.	Benson	Gas	4700	ACTIVE	39.141141	-80.370130
51	4703330820	HARRISON	E F Randolph	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4200	UNKNOWN	39.12103	-80.352489
52	4703331897	HARRISON	W M West CW275	Dominion Energy Transmission, Inc.	Gordon	not available	2492	UNKNOWN	39.140902	-80.378922
53	4703331899	HARRISON	JN Rector	Dominion Energy Transmission, Inc.	not available	not available	4390	PLUGGED	39.147409	-80.365129
54	4703331901	HARRISON	SJ Davison	Dominion Energy Transmission, Inc.	Thirty-foot	not available	2330	PLUGGED	39.154343	-80.365053
55	4703331904	HARRISON	B Swisher CW420	Dominion Energy Transmission, Inc.	Fifty-foot	Storage	2190	ACTIVE	39.132479	-80.354236
56	4703373731	HARRISON	Hazel Kieffer	Dominion Energy Transmission, Inc.	Benson	Gas	4530	ACTIVE	39.146203	-80.383580
57	4704101757	LEWIS	Fleming Howell	Dominion Energy Transmission, Inc.	Benson	Gas	4585	ACTIVE	39.116432	-80.369601
58	4704102969	LEWIS	M Edmonds cw-212	Dominion Energy Transmission, Inc.	Thirty-foot	Observation	2067	ACTIVE	39.119406	-80.376628
59	4704105056	LEWIS	Franklin Hicks	Dominion Energy Transmission, Inc.	Misc Sands-BNSN/BRLR	Gas	4287	ACTIVE	39.115377	-80.352876
60	4704105224	LEWIS	Rose Ann & John Hunter Kolb	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4450	ACTIVE	39.116102	-80.357902
GREEN DENOTES SURVEYED WELLS										

SOURCE: WVGES DATASET (2017) and WVDEP WEBSITE



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

47 03 305985

October 9, 2019

Dominion Energy Transmission, Inc.  
925 White Oaks Blvd  
Bridgeport, WV 26330

RE: Area of Review – Antonio 1206 Well Pad (N-1H to N-8H, S9H – S10H)  
Hydraulic Fracturing Notice

Dear Sir:

HG Energy II Appalachia, LLC, is developing a Marcellus pad (Antonio 1206 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 7252' TVD) and existing conventional natural gas wells.

HG Energy anticipates conducting hydraulic fracturing of the Antonio 1206 Pad during the fourth quarter of 2020. We have identified conventional natural gas wells operated by your company within 500' of one of the newly planned laterals (Antonio 1206 laterals). A plat for the well is attached.

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

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

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

Sincerely,

*Diane White*

Diane White

Enclosure

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

October 9, 2019

Antero Resources  
535 White Oaks Blvd  
Bridgeport, WV 26330

RE: Area of Review – Antonio 1206 Well Pad (N-1H to N-8H, S9H – S10H)  
Hydraulic Fracturing Notice

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*Diane White*

Diane White

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

October 9, 2019

Mineral Resource Management, LLC  
P. O. Box 603  
Jane Lew, WV 26378

RE: Area of Review – Antonio 1206 Well Pad (N-1H to N-8H, S9H – S10H)  
Hydraulic Fracturing Notice

Dear Sir:

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HG Energy anticipates conducting hydraulic fracturing of the Nutter 1208 Pad during the fourth quarter of 2020. We have identified conventional natural gas wells operated by your company within 500' of one of the newly planned laterals. A plat for the well is attached.

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Sincerely,

Diane White

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

October 9, 2019

ALAMCO, Inc  
P. O. Box 6070  
Charleston, WV 25302

RE: Area of Review – Antonio 1206 Well Pad (N-1H to N-8H, S9H – S10H)  
Hydraulic Fracturing Notice

Dear Sir:

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Sincerely,

*Diane White*

Diane White

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

47 03 305985

October 9, 2019

Spencer Enterprises  
P. O. Box 143  
Smithburg, WV 26436

RE: Area of Review – Antonio 1206 Well Pad (N-1H to N-8H, S9H – S10H)  
Hydraulic Fracturing Notice

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Sincerely,

*Diane White*

Diane White

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WV Department of  
Environmental Protection



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

October 9, 2019

Alliance Petroleum Company  
101 McQuiston Drive  
Jackson Center, PA 16133

RE: Area of Review – Antonio 1206 Well Pad (N-1H to N-8H, S9H – S10H)  
Hydraulic Fracturing Notice

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Sincerely,

*Diane White*

Diane White

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JAN 07 2020

WV Department of  
Environmental Protection



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

47 03 305985

October 9, 2019

Ross & Wharton Gas Co., Inc.  
29 Morton Street  
Buckhannon, WV 26201

RE: Area of Review – Antonio 1206 Well Pad (N-1H to N-8H, S9H – S10H)  
Hydraulic Fracturing Notice

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Sincerely,

*Diane White*

Diane White

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Environmental Protection

WW-6A1  
(5/13)

Operator's Well No. Antonio 1206 S-8H

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
-------------------------	-----------------------	-----------------------	---------	-----------

\*\*See Attached Sheets\*\*

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

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

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

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

RECEIVED  
Office of Oil and Gas

JAN 07 2020

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











JAN 07 2016

Environmental P

52	LC008034	12-0466-0018-0000 12-0466-0036-0000 12-0466-0037-0000	DOMINION TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC.  DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC.	DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC	MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT FIRST AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	58 1522 1524 1543 1576 1584 1600 WVSOS	362 33 491 1235 125 942 692
17	LC067176	12-0466-0014-0000 12-0466-0035-0000 12-0466-0014-0001 12-0466-0014-0002	IDEN MCWHORTER AND OKLA MCWHORTER, HIS WIFE; STANLEY YOCHYM AND ROSE ALICE YOCHYM, HIS WIFE; TONY YOCHYM; TONY YOCHYM AND STANLEY YOCHYM, TRADING AND DOING BUSINESS AS THE YOCHYM BROTHERS COAL COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC.	HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8 CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	788 903 1136 51 58 1522 1543 1576 1584 1600 WVSOS	497 179 250 795 362 33 1235 125 942 692
56	LC056293	12-0466-0055-000 p/o 12-0466-0038-0000	SOPHA MCWHORTER, WIDOW; AND PHYLLIS F. BEACH, A MARRIED WOMAN; AND BRIGHT J. MCWHORTER AND VIRGINIA H. MCWHORTER, HIS WIFE CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. DOMINION EXPLORATION & PRODUCTION INC DOMINION TRANSMISSION, INC. DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. CORA B. REED, WIDOW; AND OLIVE N. MCWHORTER HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. DOMINION EXPLORATION & PRODUCTION INC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION	NOT LESS THAN 1/8 CONFIRMATORY DEED MERGER/NAME CHANGE MERGER/NAME CHANGE ASSIGNMENT ASSIGNMENT MEMORANDUM FARMOUT AGREEMENT FIRST AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT NOT LESS THAN 1/8 CONFIRMATORY DEED ASSIGNMENT	985 1136 51 58 1427 1457 1522 1524 1543 1576 1584 1600 WVSOS	98 250 795 362 829 978 33 491 1235 125 942 692



59	LC076664	04-009C-0039-0000	Q100239000	CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. NOBLE ENERGY, INC. DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HOPE NATURAL GAS COMPANY CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. NOBLE ENERGY, INC. DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC.	DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HOPE NATURAL GAS COMPANY CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC	MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE ASSIGNMENT SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT ASSIGNMENT NOT LESS THAN 1/8 ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE ASSIGNMENT SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT ASSIGNMENT	WVSOS 672 684 712 717 WVSOS 722 723 734 LEWIS 736 303 425 WVSOS WVSOS 672 684 712 717 WVSOS 722 723 734 LEWIS 736	154 57 848 1 170 499 558 220 272 127 154 57 848 1 170 499 558 220
58	LC076665	04-009C-0040-0000	Q100240000	J. W. C. KOLB AND MARION L. KOLB CONSOLIDATED GAS SUPPLY CORPORATION, FORMERLY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. NOBLE ENERGY, INC. DOMINION ENERGY TRANSMISSION, INC.	HOPE NATURAL GAS COMPANY CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC	ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE ASSIGNMENT SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT ASSIGNMENT	425 WVSOS WVSOS 672 684 712 717 WVSOS 722 723 734 LEWIS 736	127 154 57 848 1 170 499 558 220

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 7 2020  
 WV Department of  
 Environmental Protection



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

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October 23, 2019

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

RE: Drilling Under Roads – Antonio 1206 S-8H  
Grant 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 along the above referenced lateral as designated on the plats.

Should you have any questions or desire further information, please contact me at [dwhite@hgenergyllc.com](mailto:dwhite@hgenergyllc.com) or 304-420-1119.

Very truly yours,

*Diane White*

Diane C. White

Enclosures

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▶ JAN 07 2020

WV Department of  
Environmental Protection

WW-6AC  
(1/12)

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

Date of Notice Certification: 12/05/2019

API No. 47- \_\_\_\_\_ - \_\_\_\_\_

Operator's Well No. Antonio 1206 S-8H

Well Pad Name: Antonio 1206 Well Pad

**Notice has been given:**

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>553378.9</u>
County:	<u>Harrison</u>		Northing:	<u>4334417.1</u>
District:	<u>Grant</u>	Public Road Access:	<u>SR 19 / Hackers Creek Road</u>	
Quadrangle:	<u>West Milford</u>	Generally used farm name:	<u>Antonio</u>	
Watershed:	<u>Middle West Fork Creek</u>			

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" 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><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><b>OOG OFFICE USE ONLY</b></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>
<p>RECEIVED Office of Oil and Gas</p> <p>AN 07 2020</p> <p>WV Department of Environmental Protection</p>		

**Required Attachments:**

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

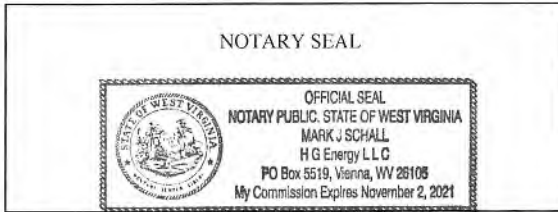


**Certification of Notice is hereby given:**

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: HG II Appalachia, LLC  
By: Diane White *Diane White*  
Its: Agent  
Telephone: 304-420-1119

Address: 5260 Dupont Road  
Parkersburg, WV 26101  
Facsimile: 304-863-3172  
Email: dwhite@hgenergyllc.com



Subscribed and sworn before me this 5th day of December, 2019.

*[Signature]* Notary Public

My Commission Expires 11/2/2021

**Oil and Gas Privacy Notice:**

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

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Office of Oil and Gas  
AN 07 2020  
WV Department of  
Environmental Protection

WW-6A  
(9-13)

API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. 1206 S-8H  
Well Pad Name: Antonio 1206

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

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

**Date of Notice:** 12/17/19 **Date Permit Application Filed:** 12/20/19

Notice of:

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

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

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

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

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

SURFACE OWNER(s)  
 Name: Antonio PLLC, c/o Mike Ross  
 Address: P. O. Box 219  
Coalton, WV 26257  
 Name: Charles R. Sutton  
 Address: 593 Long Run Road  
Lost Creek, WV 26385

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

SURFACE OWNER(s) (Impoundments or Pits)  
 Name: See Above  
 Address: \_\_\_\_\_

COAL OWNER OR LESSEE  
 Name: Antonio PLLC, c/o Mike Ross  
 Address: P. O. Box 219  
Coalton, WV 26257

COAL OPERATOR  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
 Name: Dominion Energy Transmission, Inc Attn: Ron Walden  
 Address: 925 White Oaks Blvd  
Bridgeport, WV 26330

\*Please attach additional forms if necessary

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 Office of Oil and Gas  
 JAN 07 2020  
 WV Department of Environmental Protection

**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

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

**Well Location Restrictions**

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

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API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. 1206 S-8H  
Well Pad Name: Antonio 1206

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

**Water Well Testing:**

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

**Water Testing Laboratories:**

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

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

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

**Written Comment:**

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

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

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

**Time Limits and Methods for Filing Comments.**

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

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

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WW-6A  
(8-13)

47 03 305985

API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. 1206 S-8H  
Well Pad Name: Antonio 1206

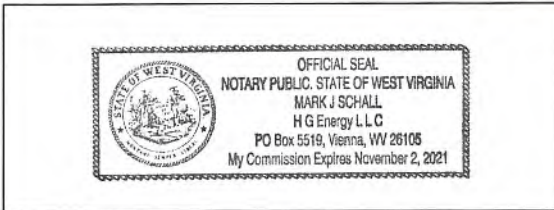
**Notice is hereby given by:**

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 [deprivacyofficer@wv.gov](mailto:deprivacyofficer@wv.gov).



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

*[Signature]* Notary Public

My Commission Expires 11/2/2021

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

December 3, 2019

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

RE: Antonio 1206 S-8H Well Work Permit Application - Notification  
Grant District, Harrison County  
West Virginia

Dear Mr. Ross:

Enclosed are copies of various application papers that we will be filing with the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas. A well work permit is being requested for the above-referenced well.

Pursuant to WV Code Chapter 22B, Article 6, you are receiving copies of this correspondence because the well or other anticipated disturbance is located on your surface property. Your rights as a surface owner (road) are detailed in the enclosed permit application papers.

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

Very truly yours,

*Diane White*

Diane C. White

Enclosures

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

47 03 305985

December 3, 2019

Charles Sutton  
593 Long Run Road  
Lost Creek, WV 26385

RE: Antonio 1206 S-8H Well Work Permit Application - Notification  
Grant District, Harrison County  
West Virginia

Dear Mr. Ross:

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

Very truly yours,

*Diane White*

Diane C. White

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

47 03 305985

December 3, 2019

Antonio PLLC,  
c/o Mike Ross  
P. O. Box 219  
Coalton, WV 26257

RE: Antonio 1206 S-8H Well Work Permit Application - Notification  
Grant District, Harrison County  
West Virginia

Dear Mr. Ross:

Enclosed are copies of various application papers that we will be filing with the West Virginia Department of Environmental Protection (WVDEP), Office of Oil and Gas. A well work permit is being requested for the above-referenced well.

Pursuant to WV Code Chapter 22B, Article 6, you are receiving copies of this correspondence because the well or other anticipated disturbance is located on your surface property. Your rights as a surface owner (road) are detailed in the enclosed permit application papers.

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

Very truly yours,

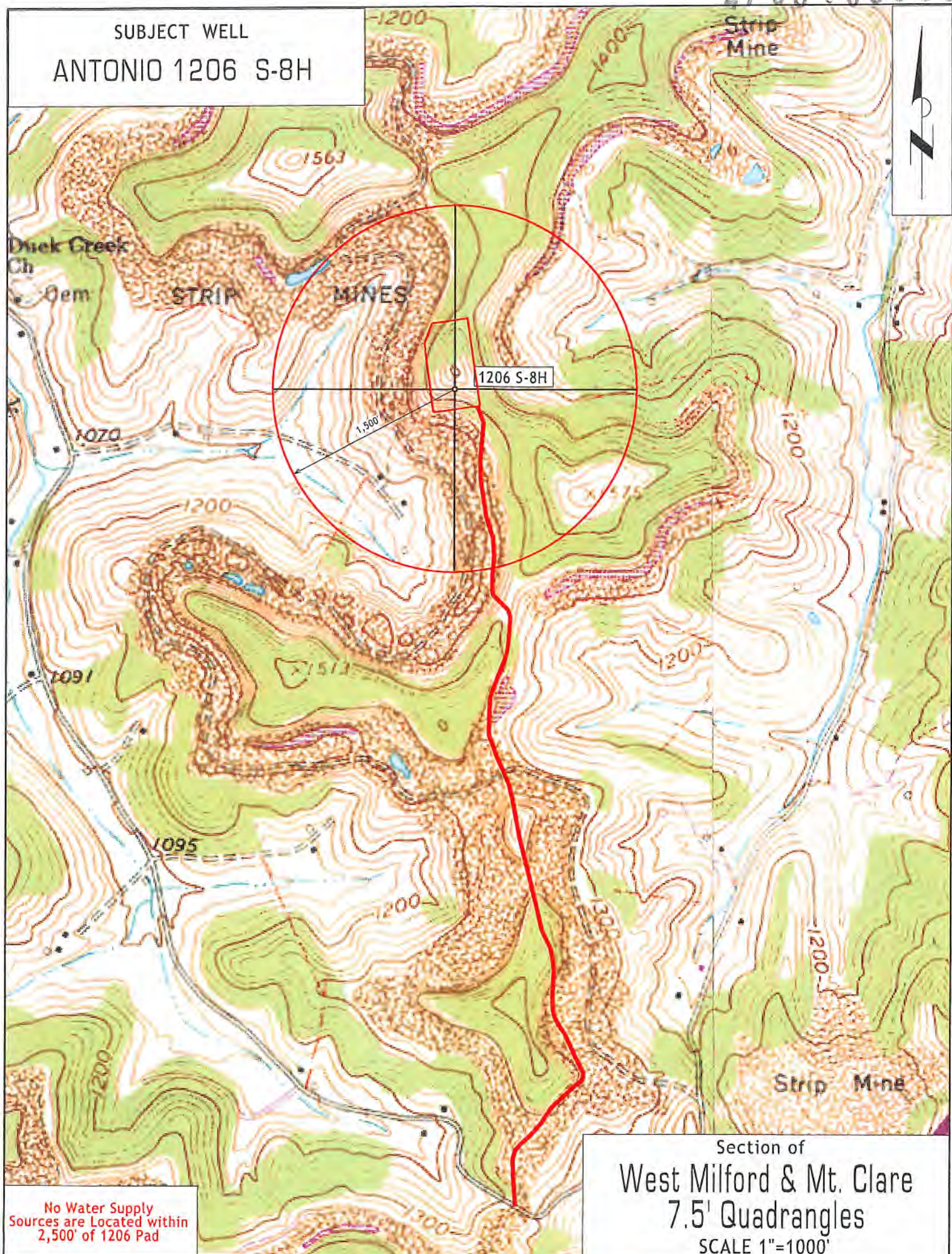
*Diane White*

Diane C. White

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SUBJECT WELL  
ANTONIO 1206 S-8H



No Water Supply  
Sources are Located within  
2,500' of 1206 Pad

Section of  
West Milford & Mt. Clare  
7.5' Quadrangles  
SCALE 1"=1000'

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:** 12/03/2019 **Date Permit Application Filed:** 12/20/2019

**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: Antonio PLLC, c/o Mike Ross  
Address: P. O. Box 219  
Coalton, WV 26257

Name: Charles R. Sutton  
Address: 593 Long Run Road  
Lost Creek, WV 26385

**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: 553378.9  
County: Harrison Northing: 4334417.1  
District: Grant Public Road Access: SR19/Hackers Creek Road  
Quadrangle: West Milford Generally used farm name: Antonio  
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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

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

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

**Oil and Gas Privacy Notice:**

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

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WW-6A5  
(1/12)

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

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**  
**Date of Notice:** 12/03/2019 **Date Permit Application Filed:** 12/20/2019

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

CERTIFIED MAIL  HAND  
RETURN RECEIPT REQUESTED DELIVERY

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

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

Name: Antonio PLLC, c/o Mike Ross  
Address: P. O. Box 219  
Coalton, WV 26257

Name: Charles R. Sutton  
Address: 593 Long Run Road  
Lost Creek, WV 26385

**Notice is hereby given:**

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

State: West Virginia UTM NAD 83 Easting: 553369.8  
County: Harrison Northing: 4334415.8  
District: Grant Public Road Access: SR19/Hackers Creek Road  
Quadrangle: West Milford Generally used farm name: Antonio  
Watershed: Middle West Fork Creek

**This Notice Shall Include:**

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

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

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

**Oil and Gas Privacy Notice:**

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

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WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways**

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

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

October 18, 2019

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

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

Subject: DOH Permit for the Antonio 1206 Pad, Harrison County  
1206 N-8H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #04-2018-1374 which has been issued to HG Energy II for access to the State Road for a haul road located off Harrison County Route 19/20 SLS. The haul route will cross Harrison County Route 25/6 by permits 04-2019-0930 & 04-2019-0931.

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  
CH, OM, D-4  
File

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**List of Frac Additives by Chemical Name and CAS #****Antonio 1206 Well Pad (N-1H to N-5H)**

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

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