



west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Monday, September 13, 2021
WELL WORK PERMIT
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD
PARKERSBURG, WV 26101

Re: Permit approval for MND23 N-3H
47-051-02409-00-00

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 is written over the printed name and title.

Operator's Well Number: MND23 N-3H
Farm Name: HG ENERGY II APPALACHIA
U.S. WELL NUMBER: 47-051-02409-00-00
Horizontal 6A New Drill
Date Issued: 9/13/2021

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.

API Number: _____

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.

09/17/2021

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 Marshall Franklin Powhatan Point
Operator ID County District Quadrangle

2) Operator's Well Number: MND23 N-3H Well Pad Name: MND23

3) Farm Name/Surface Owner: CONSOL/HG Energy II Appalachia, LLC Public Road Access: Nixon Ridge Road (SLS 21/1)

4) Elevation, current ground: 1273' Elevation, proposed post-construction: 1240'

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

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus, 6474' - 6540', 66' Thick, 4204 psi Bay Staley 8-2-21

8) Proposed Total Vertical Depth: 6535'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 15631'

11) Proposed Horizontal Leg Length: 8397'

12) Approximate Fresh Water Strata Depths: 538', 801', 898', 947'

13) Method to Determine Fresh Water Depths: Nearest offset wells

14) Approximate Saltwater Depths: None

15) Approximate Coal Seam Depths: 847' - 852'

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

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

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(a) If Yes, provide Mine Info: Name: Marshall County Mine
Depth: 890' to seam base
Seam: Pittsburgh #8
Owner: Murray Energy Corporation

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	20"	New	J-55	94	40'	40'	Drilled In
Fresh Water	13 3/8"	New	J-55	54.5	1150'	1150'	CTS
Coal							
Intermediate	9 5/8"	New	J-55	40	3150'	3150'	CTS
Production	5 1/2"	New	P-110	23	15631'	15631'	CTS
Tubing							
Liners							

JCB
8/19/21

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	20"	20"	0.438	2110		Type 1, Class A	
Fresh Water	13 3/8"	17.5"	0.380	2730		Type 1, Class A	40% excess, yield = 1.20, CTS
Coal							
Intermediate	9 5/8"	12 1/4"	0.395	3950		Type 1, Class A	40% excess, yield = 1.20, CTS
Production	5 1/2"	8 1/2"	0.415	14520	11500	Type 1, Class A	20% excess, lead yield = 1.19, CTS
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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

Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6,535 feet. Drill horizontal leg to estimated 8,397' lateral length, 15,631' TMD. Hydraulically fracture and stimulate and be capable of producing the Marcellus Formation. Should an unanticipated void be encountered 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.

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

The stimulation will be 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 expected to exceed 11,500 psi.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 10.557 acres

22) Area to be disturbed for well pad only, less access road (acres): 8.498 acres

23) Describe centralizer placement for each casing string:

Conductor - N/A
Surface Casing - Bow Springs (over collars) on first 2 joints then every third joint to 100' from surface
Intermediate Casing - Bow Springs (over collars) on first 12 joints, then every third joint to 100' from surface
Production Casing - Run 1 spiral centralizer every 5 joints from the top of the curve to surface. Run 1 spiral centralizer every 3 joints from the 1st 5.5" long joint to the top of the curve.

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

Conductor - Already grouted in
Surface Casing - "15.6 ppg PNE-1 + 3% bwoc CaCl 40% ExcessYield=1.20 / CTS"
Intermediate Casing - "Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess"
Production Casing - "Lead: 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA17020 ExcessLead Yield=1.19Tail Yield=1.94CTS"

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25) Proposed borehole conditioning procedures:

Conductor - Once at casing setting depth, ensure hole is clean at TD
Surface Casing - Circulate & condition @ TD w/ Air. RIH w/ casing & fill w/ Fresh Water. Circulate a minimum of 1 hole volume, plus 30 bbls of 6% bentonite Gel/50# of poly flake, then clear casing w/ Fresh Water prior to pumping cement.
Intermediate Casing - Circulate & condition @ TD w/ Air. RIH w/ casing & fill w/ Fresh Water. Circulate a minimum of 1 hole volume, plus 30 bbls of 6% bentonite Gel/50# of poly flake, then clear casing w/ Fresh Water prior to pumping cement.
Production Casing - Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.

*Note: Attach additional sheets as needed.

MND23 Well Pad (N-1H to N-6H)
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>Calcium magnesium oxide</td> <td>90 - 100</td> <td>37247-91-9</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Calcium magnesium oxide	90 - 100	37247-91-9												
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MPA-170	Gas Migration	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>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 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>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> <tr> <td>Calcium oxide</td> <td>10 - 30</td> <td>1305-78-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7	Calcium oxide	10 - 30	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, C10-15-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, C10-15-alkyl glycosides	5 - 10	110615-47-9	Alkylarylsulfonate amine salt	1 - 5	Trade secret.	Polyoxyalkylenes	0.1 - 1	Trade secret.
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MND23 N-3H
Marcellus Shale Horizontal
Marshall County, WV
WV Dept. of Environmental Protection

			MND23 N-3H SHL				14459387.11N 1706163.27E			
Ground Elevation	1240'	(RKB) 25'	MND23 N-3H LP				14458331.96N 1705051.98E			
Azm	323.643°		MND23 N-3H BHL				14465094.38N 1700074.06E			

WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
	20"	20" 94# J-55	Conductor	0	40	AIR	Drilled in via Dual Rotary (no annular space) "sanded in"	N/A	Once at casing setting depth, ensure hole is clean at TD	Conductor casing = 0.438" wall thickness Burst=2113 psi
	17.5"	13-3/8" 54.5# J-55 BTC	Fresh Water	538' - 801', 898' - 947'		AIR	15.6 ppg Class A Naat 64#/sk 40% Excess Yield=1.18 / CTS	Bow Springs (over collars) on first 2 joints then every third joint to 100' from surface	Circulate & condition @ TD w/ Air, RIH w/ casing & fill w/ Fresh Water. Circulate a minimum of 1 hole volume, plus 30 bbls of 6% bentonite Gel/50# of poly flake, then clear casing w/ Fresh Water prior to pumping cement.	Surface casing = 0.380" wall thickness Burst=2730 psi
			Surface Casing	0	1150					
	12.25"	9-5/8" 40# J-55 BTC	Coal(s)	917' - 922'		AIR	15.6 ppg Class A 94#/sk 1% Calcium BWOC - 40% Excess Yield=1.2 / CTS	Bow Springs (over collars) on first 12 joints, then every third joint to 100' from surface	Circulate & condition @ TD w/ Air, RIH w/ casing & fill w/ Fresh Water. Circulate a minimum of 1 hole volume, plus 30 bbls of 6% bentonite Gel/50# of poly flake, then clear casing w/ Fresh Water prior to pumping cement.	Intermediate casing = 0.395" wall thickness Burst=3650 psi
			Big Lime / Big Injun	2170 / 2274	2263 / 2305					
			Pocono	2479						
			5th Sand	2640						
	8.75" Vertical	5-1/2" 20# P-110 HP CDC HTQ	Intermediate Casing	0	3160	AIR and/or 9.0ppg SOBMs	Class A 14.8 ppg Yield 1.34 D255 - 0.4% BWOB Fluid Loss D198 - 0.55% BWOB Retarder D047 - 0.02 gal / sack Anti Foam D208 - 0.05% BWOB Viscosifier 10% Excess	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 = 0.361" wall thickness Burst=12640 psi Note: Actual centralizer schedules may be changed due to hole conditions
			Rhinestreet	5981	6253					
	8.75" / 8.5" Curve	5-1/2" 20# P-110 HP CDC HTQ	Cashacua	6253	6317	Air then 11.5ppg-12.5ppg SOBMs	Class A 14.8 ppg Yield 1.34 D255 - 0.4% BWOB Fluid Loss D198 - 0.55% BWOB Retarder D047 - 0.02 gal / sack Anti Foam D208 - 0.05% BWOB Viscosifier 10% Excess	Run 1 spiral centralizer every 3 joints from 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 = 0.361" wall thickness Burst=12640 psi Note: Actual centralizer schedules may be changed due to hole conditions
Middlesex			6317	6340						
West River			6340	6407						
Burkatt			6407	6425						
Tully			6425	6454						
8.5" Lateral	5-1/2" 20# P-110 HP CDC HTQ	Hamilton	6454	6489	11.5ppg-12.5ppg SOBMs	Class A 14.8 ppg Yield 1.34 D255 - 0.4% BWOB Fluid Loss D198 - 0.55% BWOB Retarder D047 - 0.02 gal / sack Anti Foam D208 - 0.05% BWOB Viscosifier 10% Excess	Run 1 spiral centralizer every 3 joints from 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 = 0.361" wall thickness Burst=12640 psi Note: Actual centralizer schedules may be changed due to hole conditions	
		Marcellus	6489	6545						
			LP TMD / TVD	15830	6535					
			Onondaga	6545						

LP @ 5535' TVD / 7230' MD 8.5" Hole - Cemented Long String 5-1/2" 20# P-110 HP CDC HTQ 17-8400' ft Lateral TD @ 17-5535' TVD 17-15630' MD

X=centralizers

4705162409

Cuttings Disposal/Site Water

Cuttings - Haul off Company:

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

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

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

Disposal Locations:

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

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

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

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

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

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

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

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

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

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

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Wetzel County Landfill Permit # SWF-1021-97 / WV 0109185
Rt 1, Box 156A
New Martinsville, WV 26035
804-455-8800

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

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

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

Water Haul off Companies:

Dynamic Structures, Clear Creek DOT # 720485
3790 State Route 7
New Waterford, OH 44445
830-892-0164

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

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

Nuverra Environmental Solutions
11042 Veterans Memorial Highway
Masontown, WV 26542

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

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

Disposal Locations:

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

Solidification/Incineration
Soil Remediation, Inc. Permit # 02-20753
6065 Arrel-Smith Road
Lowelville, OH 44436
880-586-6825

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

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

Force, Inc.
1380 Rta. 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 15622

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

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

Grosella (SWIW #34)
Permit # 4096
Rt. 88
Garrattsville, OH
713-278-4816

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

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

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

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

Goff SWD #1 (SWIW # 27)
Permit # 34-119-2-8776-000
300 Cherrington Pkwy, Suite 200
Coraopolis, PA 15108
412-329-7275

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

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

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

US Steele 1.1385
Permit # 47-001-00561
200 Evergreen Drive
Waynesburg, PA 15730
304-323-6568

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

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4705102409

Form WW-9

Operator's Well No. MND23 N-3H

HG Energy II Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 10.5 Acres 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: *Roy Little*

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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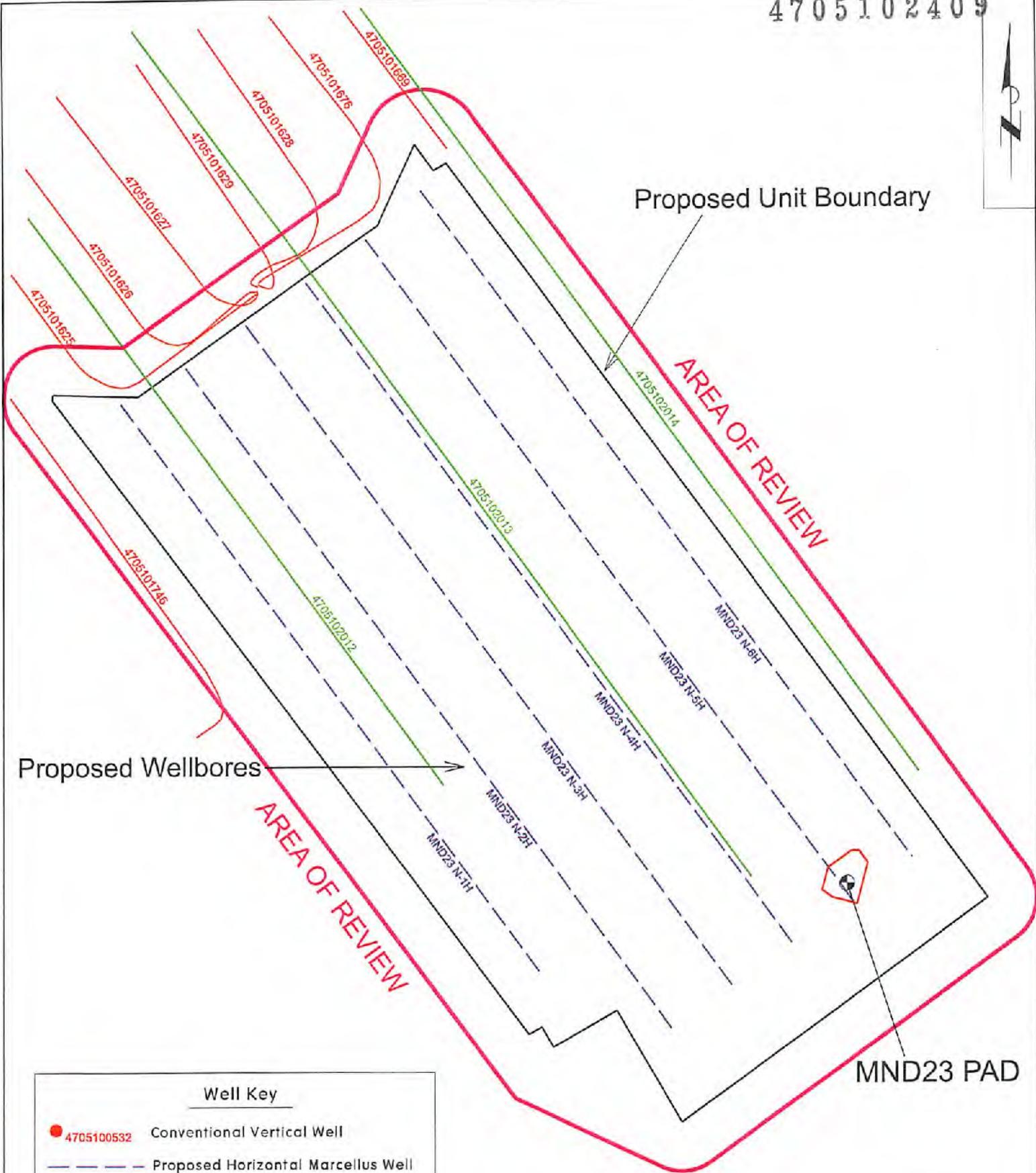
WV Department of
Environmental Protection

Title: Oil & Gas Inspector

Date: 8-2-21

Field Reviewed? () Yes () No

09/17/2021



Proposed Wellbores

Proposed Unit Boundary

AREA OF REVIEW

AREA OF REVIEW

MND23 PAD

Well Key	
● 4705100532	Conventional Vertical Well
---	Proposed Horizontal Marcellus Well
---	Existing Horizontal Marcellus Well
---	Existing Horizontal Utica Well

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Environmental Protection

NOTE:
See Attached Spreadsheet for Well Data

DATA SOURCE
WVGES Data Set - 2020

Area of Review for:

MND23 PAD

- Proposed MND23 N-1H
- Proposed MND23 N-2H
- Proposed MND23 N-3H
- Proposed MND23 N-4H
- Proposed MND23 N-5H
- Proposed MND23 N-6H

Franklin District, Marshall County, W.Va.

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

09/17/2021



SCALE: 1" = 1,320'

**EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:
MND23 PAD AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H, N-5H & N-6H**

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4705101625	MARSHALL	MND9 AHS	HG ENERGY II APPALACHIA	MARCELLUS SHALE	Horizontal Gas Production	6,202	ACTIVE	39.831390	-80.787131
2	4705101626	MARSHALL	MND9 BHS	HG ENERGY II APPALACHIA	MARCELLUS SHALE	Horizontal Gas Production	6,212	ACTIVE	39.831444	-80.787115
3	4705101627	MARSHALL	MND9 CHS	HG ENERGY II APPALACHIA	MARCELLUS SHALE	Horizontal Gas Production	6,241	ACTIVE	39.831497	-80.787099
4	4705101628	MARSHALL	MND9 EHS	HG ENERGY II APPALACHIA	MARCELLUS SHALE	Horizontal Gas Production	6,248	ACTIVE	39.831604	-80.787067
5	4705101629	MARSHALL	MND9 FHS	HG ENERGY II APPALACHIA	MARCELLUS SHALE	Horizontal Gas Production	6,231	ACTIVE	39.831658	-80.787050
6	4705101669	MARSHALL	MND3 FHS	HG ENERGY II APPALACHIA	MARCELLUS SHALE	Horizontal Gas Production	6,299	ACTIVE	39.850397	-80.792052
7	4705101676	MARSHALL	MND9 DHS	HG ENERGY II APPALACHIA	MARCELLUS SHALE	Horizontal Gas Production	6,231	ACTIVE	39.831698	-80.787039
8	4705101746	MARSHALL	MND6 AHS	HG ENERGY II APPALACHIA	MARCELLUS SHALE	Horizontal Gas Production	6,500	ACTIVE	39.817733	-80.791522
9	4705102012	MARSHALL	MND20 BU	HG ENERGY II APPALACHIA	UTICA SHALE	Horizontal Gas Production	10,700	DRILLED - NOT COMPLETED	39.851695	-80.803153
10	4705102013	MARSHALL	MND20 CU	HG ENERGY II APPALACHIA	UTICA SHALE	Horizontal Gas Production	10,700	DRILLED - NOT COMPLETED	39.851691	-80.803044
11	4705102014	MARSHALL	MND20 DU	HG ENERGY II APPALACHIA	UTICA SHALE	Horizontal Gas Production	10,700	DRILLED - NOT COMPLETED	39.851731	-80.802995
12	4705102045	MARSHALL	MND20 EU	HG ENERGY II APPALACHIA	UTICA SHALE	Horizontal Gas Production	10,700	DRILLED - NOT COMPLETED	39.851774	-80.803054

SOURCE: WVGES DATASET (2017) and WVDEP WEBSITE

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Environmental Protection

HG Energy II Appalachia, LLC

Site Safety Plan

**MND 23 Well Pad
1931 Nixon Ridge Lane
Moundsville, Marshall County, WV 26041**

July 2021: Version 1

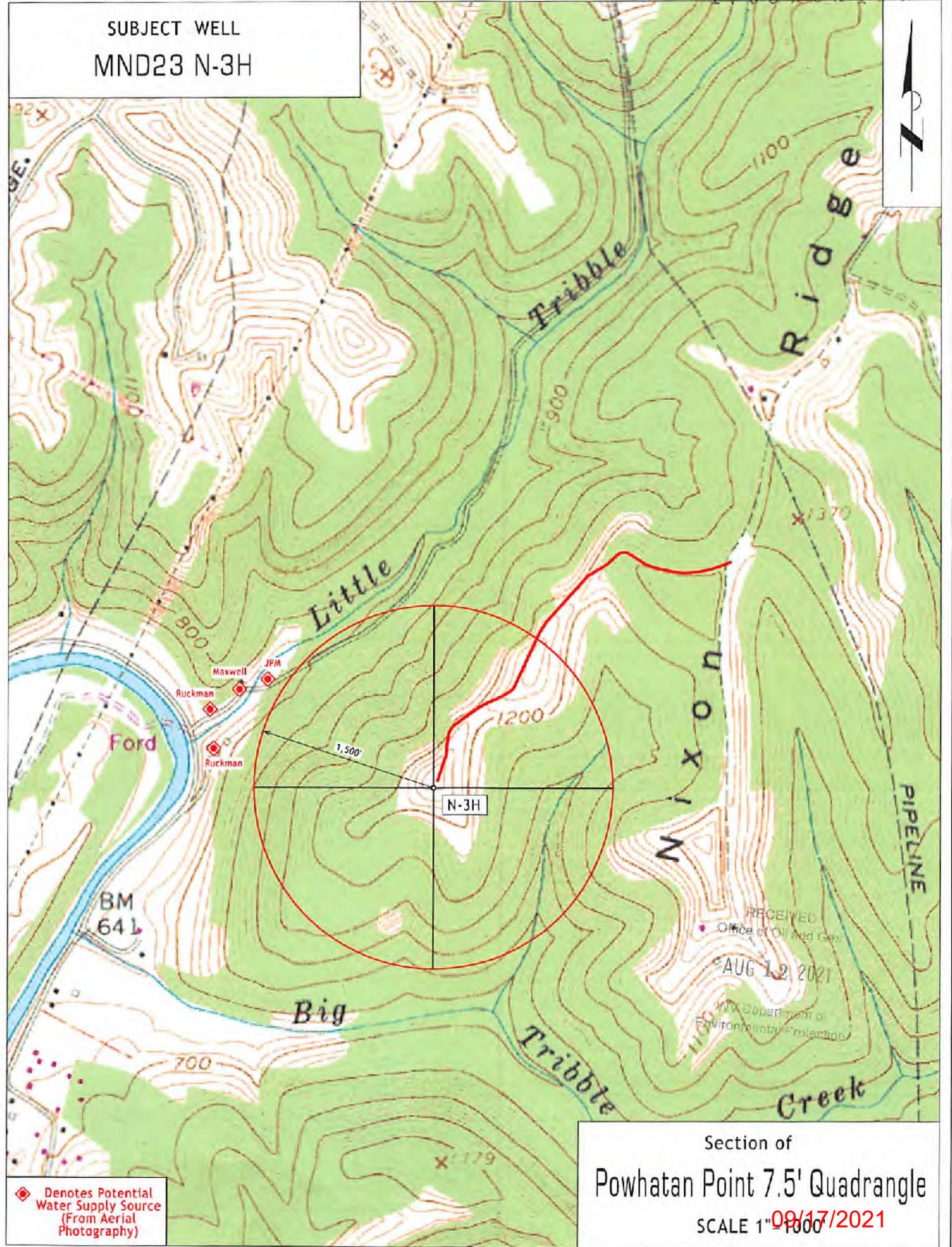
**For Submission to
West Virginia Department of Environmental Protection,
Office of Oil and Gas**

Bay Stoltz 8-2-21
HG Energy II Appalachia, LLC.

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Environmental Protection

5260 Dupont Road
Parkersburg, WV 26101

SUBJECT WELL
MND23 N-3H



◆ Denotes Potential Water Supply Source (From Aerial Photography)

Section of
Powhatan Point 7.5' Quadrangle
SCALE 1" = 1000' 09/17/2021

Bottom Hole is located on topo map 1,022 feet south of Latitude: 39° 50' 00"

Well is located on topo map 6,757 feet south of Latitude: 39° 50' 00"

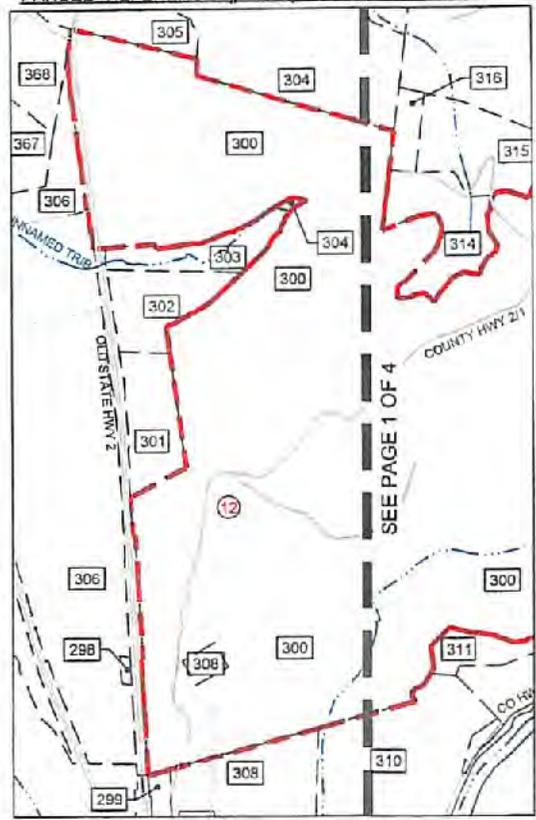
NOTES

- 1 There are no water wells or developed springs within 250' of proposed well.
- 2 There are no existing buildings within 625' of proposed well
- 3 Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake
- 4 There are no native trout streams within 300' of proposed well
- 5 Proposed well is greater than 1000' from surface/groundwater intake or public water supply
- 6 It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, and based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.



Bottom Hole is located on topo map 10,532 feet west of Longitude: 80° 45' 00"
Well is located on topo map 4,414 feet west of Longitude: 80° 45' 00"

DETAIL (REMAINDER OF AFFECTED PARCEL REFERENCE # 300) SCALE: 1"=2,000'



GRID NORTH
WEST VIRGINIA COORDINATE
SYSTEM OF 1983
NORTH ZONE

SURFACE HOLE LOCATION (SHL)
UTM 17 - NAD83(m)
N: 4407230.01
E: 520039.61
UTM 17 - NAD83(ft)
N: 14459387.11
E: 1706163.27
LAT/LON DATUM-NAD83
LAT: 39.814815°
LON: -80.765865°

APPROX. LANDING POINT
UTM 17 - NAD83(m)
N: 4406908.40
E: 519700.88
UTM 17 - NAD83(ft)
N: 14458331.96
E: 1705051.98
LAT/LON DATUM-NAD83
LAT: 39.811925°
LON: -80.769832°

BOTTOM HOLE LOCATION
UTM 17 - NAD83(m)
N: 4408969.59
E: 518183.61
UTM 17 - NAD83(ft)
N: 14485094.38
E: 1700074.06
LAT/LON DATUM-NAD83
LAT: 39.830530°
LON: -80.787501°

Waterford Corporate Park, II, Suite 101
2500 Gaslight Drive
Sewersky, PA 15143
P: 224-444-1100
F: 224-444-1104
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LEGEND	
	PROPOSED SURFACE HOLE LOCATION ON 7.5' TOPOGRAPHIC MAP
	PROPOSED BOTTOM HOLE LOCATION ON 7.5' TOPOGRAPHIC MAP

FILE # MND23 N-3H
DRAWING # MND23 N-3H
SCALE 1"=2000'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT H 138: 638.58'

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

SIGNED:
R.P.E.: _____ L.L.S.: P.S. NO. 2269



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25304



DATE: FEBRUARY 28, 2019
OPERATOR'S WELL #: MND23 N-3H
API WELL # 47 51 02409
STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: BIG TRIBBLE CREEK-OHIO RIVER ELEVATION: 1240'
COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWHATAN POINT, W. VA./OHIO
SURFACE OWNER: HG ENERGY II, APPALACHIA LLC. ACREAGE: 126.6
OIL & GAS ROYALTY OWNER: CNX GAS COMPANY ACREAGE: 126.6

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: POINT PLEASANT / MARCELLUS ESTIMATED DEPTH: TVD: 8,535' ± TMD: 15,631' ±
WELL OPERATOR: HG ENERGY II APPALACHIA, LLC DESIGNATED AGENT: DIANE C. WHITE WV Department of
Address: 5260 DUPONT ROAD Address: 5260 DUPONT ROAD Environmental Protection
City PARKERSBURG State WV Zip Code 26101 City PARKERSBURG State WV Zip Code 26101

09/17/2021
Office of Oil and Gas
AUG 12 2021

168	MCCLINTOCK DALE ET. UX.	TAX MAP NO. 05-0004-0013-0000-0000
169	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0004-0015-0000-0000
182	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0012-0000-0000
183	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0005-0011-0000-0000
184	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0002-0012-0000-0000
193	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0002-0005-0000-0000
220	MORRIS FRED H ET UX	TAX MAP NO. 05-0004-0009-0000-0000
298	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0006-0011-0000-0000
299	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0007-0003-0000-0000
300	OHIO POWER CO.	TAX MAP NO. 05-0006-0003-0000-0000
301	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0006-0005-0000-0000
302	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0006-0006-0000-0000
303	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0008-0001-0000-0000
304	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0016-0000-0000
305	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0013-0000-0000
306	OHIO POWER CO.	TAX MAP NO. 05-0005-0010-0000-0000
307	CNX GAS COMPANY LLC.	TAX MAP NO. 05-0007-0005-0000-0000
308	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0007-0002-0000-0000
309	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0007-0003-0000-0000
310	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0007-0004-0000-0000
311	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0008-0004-0000-0000
313	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0008-0002-0000-0000
314	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0008-0002-0000-0000
315	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0002-0002-0000-0000
316	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0002-0001-0000-0000
317	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0001-0000-0000
318	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0002-0000-0000
319	OHIO POWER CO.	TAX MAP NO. 05-0005-0003-0000-0000
320	SANCHEZ GENEVA BASSETT	TAX MAP NO. 05-0005-0004-0000-0000
322	ROBBINS JAMES E & DIANA C	TAX MAP NO. 05-0005-0005-0000-0000
323	MCGINNIS TIMOTHY L SR ET UX.	TAX MAP NO. 05-0003-0003-0000-0000
324	OHIO POWER CO.	TAX MAP NO. 05-0005-0006-0000-0000
325	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0005-0007-0000-0000
326	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0005-0008-0000-0000
327	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0005-0009-0000-0000
329	MCLEROY COAL COMPANY	TAX MAP NO. 05-0005-0009-0001-0000
330	HEATHERINGTON ARDEN RAY	TAX MAP NO. 05-0002-0013-0001-0000
331	GATTS RICHARD L.	TAX MAP NO. 05-0008-0005-0000-0000
332	MILLER EDWIN C.	TAX MAP NO. 05-0008-0007-0000-0000
333	GATTS RICHARD L.	TAX MAP NO. 05-0008-0006-0000-0000
334	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0002-0003-0000-0000
341	DELBURGGE EMERALD H JR.	TAX MAP NO. 05-0008-0003-0000-0000
342	BERISFORD BESSIE M. EST.	TAX MAP NO. 05-0008-0004-0000-0000
361	NIEMAN FRANCES E.	TAX MAP NO. 05-0008-0004-0001-0000
362	CLARK BEVERLY E.	TAX MAP NO. 05-0008-0001-0001-0000
363	RUCKMAN SHELDON R. ET. AL.	TAX MAP NO. 05-0008-0001-0004-0000
368	OHIO POWER COMPANY	TAX MAP NO. 05-0001-0022-0000-0000
379	ARRUDA JOHN F. ET. UX.	TAX MAP NO. 05-0005-0004-0001-0000
380	NO ASSIGNED TRACT #	
382	RUCKMAN MARVIN E. ET. UX.	TAX MAP NO. 05-0008-0001-0003-0000
383	MAXWELL WILLIAM L. SR. ET. UX.	TAX MAP NO. 05-0004-0018-0000-0000
384	HOLMAN TERRY L.	TAX MAP NO. 05-0004-0016-0000-0000
385	RUCKMAN MARVIN E.	TAX MAP NO. 05-0008-0001-0002-0000
386	MAXWELL WILLIAM JR.	TAX MAP NO. 05-0004-0019-0000-0000
387	HOLMAN TERRY L.	TAX MAP NO. 05-0004-0017-0000-0000

388	HOLSTINE BERNARD W. & ROXANN L.	TAX MAP NO. 05-0004-0014-0000-0000
389	HOLSTINE BERNARD W. & ROXANN L.	TAX MAP NO. 05-0004-0014-0002-0000
390	LEGG JAMES R. EST.	TAX MAP NO. 05-0009-0003-0000-0000
391	MCCLINTOCK DALE EDWARD	TAX MAP NO. 05-0009-0006-0000-0000
392	RUCKMAN JESSIE GLADYS - LIFE	TAX MAP NO. 05-0009-0001-0000-0000
393	LEGG JEFFERY L.	TAX MAP NO. 05-0009-0002-0001-0000
394	ANDERSON RHONDA MARIE	TAX MAP NO. 05-0004-0014-0001-0000
402	MCCLINTOCK DALE EDWARD	TAX MAP NO. 05-0009-0005-0000-0000
403	LEGG JAMES R EST	TAX MAP NO. 05-0009-0002-0000-0000
404	WHITE KENNETH E ET UX	TAX MAP NO. 05-0009-0002-0002-0000
405	ARNOLD LLOYD C & JUDITH C	TAX MAP NO. 05-0009-0035-0000-0000
406	FRANCIS JAMES EDWARD ET UX	TAX MAP NO. 05-0008-0008-0000-0000
407	DALLISON LUMBER CO	TAX MAP NO. 05-0009-0031-0000-0000
408	ARRICK DAVID H ET UX	TAX MAP NO. 05-0011-0004-0000-0000
409	RINE WALTER C	TAX MAP NO. 05-0011-0002-0000-0000
410	JACKSON JAMES B JR ET UX	TAX MAP NO. 05-0008-0009-0000-0000
411	WHITT PAUL	TAX MAP NO. 05-0011-0001-0005-0000
412	MOORE RANDYLYN ET AL	TAX MAP NO. 05-0011-0001-0000-0000
413	YOHO RONALD G ET AL	TAX MAP NO. 05-0007-0032-0000-0000
414	ROUPE WILLIAM N ET UX	TAX MAP NO. 05-0007-0031-0000-0000
415	CAMPBELL BRUCE S	TAX MAP NO. 05-0007-0031-0001-0000
416	ARNOLD LLOYD C. & JUDITH C.	TAX MAP NO. 05-0009-0041-0000-0000
417	STOUT JAMES L.	TAX MAP NO. 05-0009-0007-0000-0000

Washington Corporate Park # Suite 101
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Smyth, VA 22941



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LEGEND
REFERENCE NUMBER
FOR SURFACE PARCEL
OWNERSHIP

100

FILE # MND23 N-3H
DRAWING # MND23 N-3H
SCALE 1"=2000'
MINIMUM DEGREE OF ACCURACY 1/2500
PROVEN SOURCE U.S.G.S. MONUMENT
OF ELEVATION H 138: 638.58'

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

SIGNED: 
R.P.E. L.L.S.: P.S. NO. 2269



PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: BIG TRIBBLE CREEK-OHIO RIVER
COUNTY/DISTRICT: MARSHALL / FRANKLIN
SURFACE OWNER: HG ENERGY II, APPALACHIA LLC.
OIL & GAS ROYALTY OWNER: CNX GAS COMPANY

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION POINT PLEASANT / MARCELLUS
WELL OPERATOR HG ENERGY II APPALACHIA, LLC
Address: 5280 DUPONT ROAD
City PARKERSBURG State WV Zip Code 26101



DATE: FEBRUARY 26, 2019
OPERATOR'S WELL #: MND23 N-3H
API WELL # 47 51 62409
STATE COUNTY PERMIT

PAGE: 3 OF 4

ELEVATION: 1240'
QUADRANGLE: POWHATAN POINT, W. VA./OHIO
ACREAGE: 126.5
ACREAGE: 126.8

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AUG 12 2021
WV Department of Environmental Protection

ESTIMATED DEPTH: TVD: 6,535' ± TMD: 15,631' ±
DESIGNATED AGENT: DIANE C. WHITE
Address: 5260 DUPONT ROAD
City PARKERSBURG State WV Zip Code 26101

HG Plat Number	MRID	Original Lessee	Original Lessee	Surface Parcel Code					
1	05-0004-0014-0000-0000	MILLER CHARLES W	CHEVRON USA INC	385			Cynthia P. Hopkins, as Trustee of the Cynthia P. Hopkins Revocable Trust	NOBLE ENERGY INC	
		PARSONS PAUL ET UX	CHEVRON USA INC				Elizabeth A. Strusbaugh and James R. Strusbaugh	NOBLE ENERGY INC	
		RUSSELL SHARON LYN	CHEVRON USA INC				Janet and John Blankenship	NOBLE ENERGY INC	
		HUFF TIMOTHY ET UX	CHEVRON USA INC				Jean C. Thomas	NOBLE ENERGY INC	
		ARNOLD LLOYD C ET UX	CHEVRON USA INC				Mary E. Bassett	NOBLE ENERGY INC	
		CRONIN MARY JO	CHEVRON USA INC				Robert B. and Violet Thomas	NOBLE ENERGY INC	
		KURPIL RICHARD ET UX	CHEVRON USA INC				Roger B. and Inken P. Rose	NOBLE ENERGY INC	
		CLIFTON CLARA MAE	CHEVRON USA INC				Ruth Ann and Furman F. Wallace	NOBLE ENERGY INC	
		EDWARDS GEORGE ET UX	CHEVRON USA INC				Ruth E. Bassett Meadows and O.W. Meadows Jr	NOBLE ENERGY INC	
		KYLE DONNA FAE	CHEVRON USA INC				NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
		CONNER JUDITH MAY	CHEVRON USA INC				AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc.	324
		SCHEIBELHOOD PAUL ET AL	AB RESOURCES LLC				NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
		AB RESOURCES LLC	NPAR LLC				NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
		NPAR LLC	Chevron USA INC				AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc.	319
		Chevron USA INC	HG ENERGY II APPALACHIA, LLC				NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
2	05-0009-0003-0000-0000	James Redman Legg II ET AL	Noble Energy, Inc.	390	10	05-0005-0006-0000-0000	NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
		Noble Energy, Inc.	CNX Gas Company, LLC				AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc.	319
		CNX Gas Company, LLC	Noble Energy, Inc.				NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC				NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
3	05-0009-0007-0001-0000	Jeffrey L. Legg	Noble Energy, Inc.	393	11	05-0005-0003-0000-0000	NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
		Noble Energy, Inc.	CNX Gas Company, LLC				Consolidation Coal Company	CNX Gas Company, LLC	300
		CNX Gas Company, LLC	Noble Energy, Inc.				CNX Gas Company, LLC	Noble Energy, Inc.	
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC				NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
4	05-0009-0001-0000-0000, 05-0009-0001-0001-0000, 05-0009-0001-0002-0000, 05-0009-0001-0003-0000, 05-0009-0001-0004-0000	Jessi Gladys Ruckman Et Al	Noble Energy, Inc.	392, 362, 385, 382, 363	12	05-0005-0002-0000-0000	Margaret Games	CNX Gas Company, LLC	318
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC				Elizabeth Patterson	CNX Gas Company, LLC	
5	05-0008-0007-0000-0000	Edwin C. Miller and Klumberly Ann Miller	Noble Energy, Inc.	332	13		Charles J. Wiesner	CNX Gas Company, LLC	
		Noble Energy, Inc.	CNX Gas Company, LLC						
		CNX Gas Company, LLC	Noble Energy, Inc.						
		Noble Energy, Inc.	HG ENERGY II APPALACHIA, LLC						
6	NO ASSIGNED TRACT #	WV Division of Natural Resources	Noble Energy, Inc.	380					
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC						
7	05-0008-0006-0000-0000	Richard J. Gatts	Chevron USA INC	333					
		Chevron USA INC	HG ENERGY II APPALACHIA, LLC						
8	05-0008-0005-0000-0000	Richard J. Gatts	Chevron USA INC	331					
		Chevron USA INC	HG ENERGY II APPALACHIA, LLC						
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC						
9	05-0005-0004-0000-0000	Barbara Kay Ewing and Wilber E. Ewing	NOBLE ENERGY INC	329					
		Charles Howard Bassett JR and Ruby D. Bassett	NOBLE ENERGY INC						

LEGEND
 ① REFERENCE NUMBER FOR MINERAL OWNERSHIP



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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

SIGNED: 
 R.P.E.: _____ L.L.S.: P.S. NO. 2269

FILE #: MND23 N-3H
 DRAWING #: MND23 N-3H
 SCALE: 1"=2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT H 138: 638.68'

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



DATE: FEBRUARY 25, 2019
 OPERATOR'S WELL #: MND23 N-3H
 API WELL # 47 51 02409
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

PAGE: 4 OF 4

WATERSHED: BIG TRIBBLE CREEK-OHIO RIVER ELEVATION: 1240'
 COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWHATAN POINT, W. VA./OHIO

SURFACE OWNER: HG Energy II, Appalachia LLC. ACREAGE: 126.6
 OIL & GAS ROYALTY OWNER: CNX GAS COMPANY ACREAGE: 126.6

09/17/2021 RECEIVED

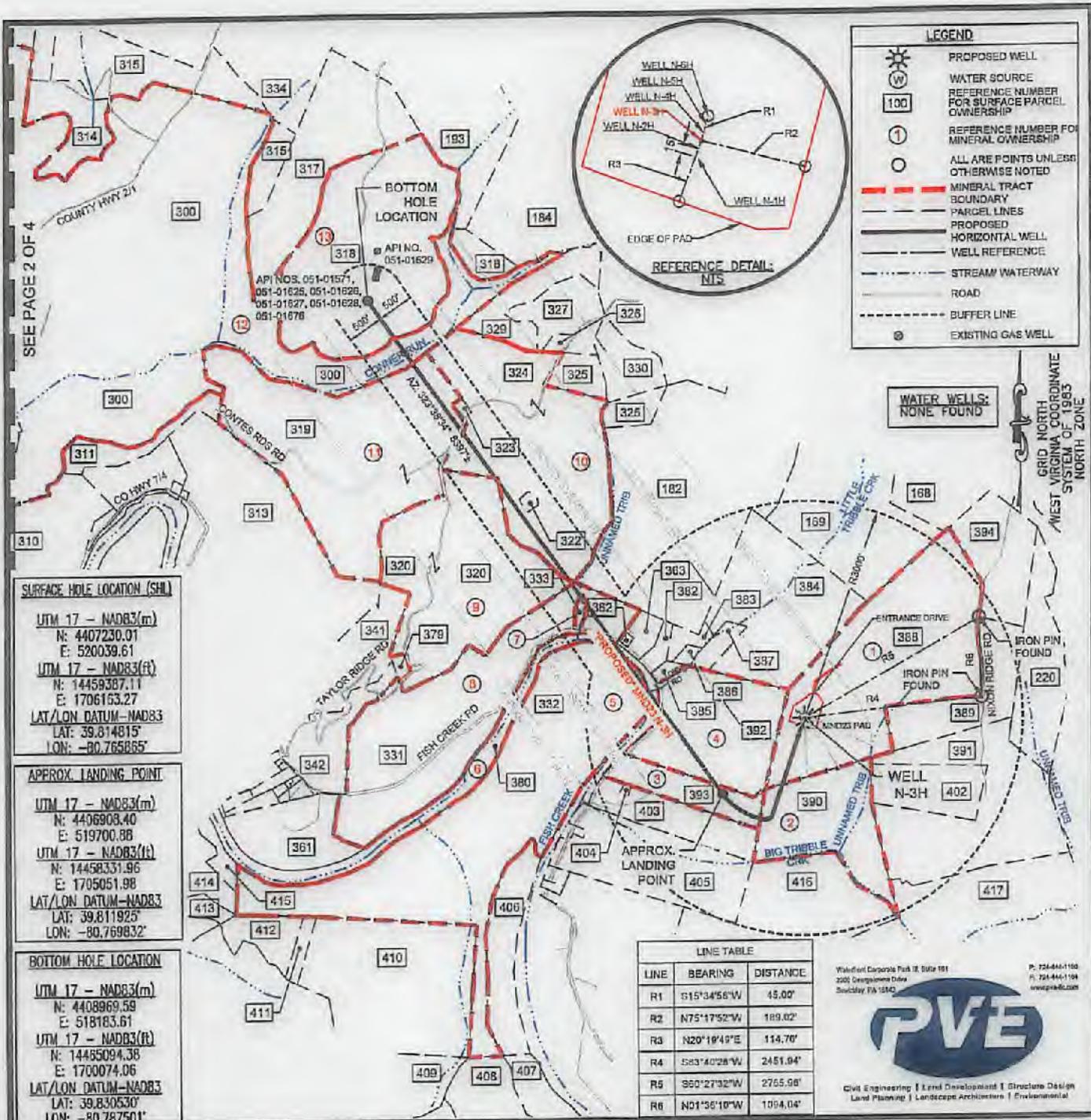
Office of Oil and Gas

AUG 12 2021

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: POINT PLEASANT / MARCELLUS ESTIMATED DEPTH: TVD: 6,535' ± TMD: 15,631' ±
 WELL OPERATOR: HG ENERGY II APPALACHIA, LLC DESIGNATED AGENT: DIANE C. WHITE
 Address: 5260 DUPONT ROAD Address: 5260 DUPONT ROAD
 City PARKERSBURG State WV Zip Code 26101 City PARKERSBURG State WV Zip Code 26101

WV Department of Environmental Protection



SURFACE HOLE LOCATION (SHL)

UTM 17 - NAD83(m)
 N: 4407230.01
 E: 520039.61

UTM 17 - NAD83(ft)
 N: 14459387.11
 E: 1706153.27

LAT/LON DATUM-NAD83
 LAT: 39.814815°
 LON: -80.765865°

APPROX. LANDING POINT

UTM 17 - NAD83(m)
 N: 4406903.40
 E: 519700.88

UTM 17 - NAD83(ft)
 N: 14458331.96
 E: 1705051.98

LAT/LON DATUM-NAD83
 LAT: 39.811925°
 LON: -80.769832°

BOTTOM HOLE LOCATION

UTM 17 - NAD83(m)
 N: 4408969.59
 E: 518183.61

UTM 17 - NAD83(ft)
 N: 14485094.38
 E: 1700074.06

LAT/LON DATUM-NAD83
 LAT: 39.830530°
 LON: -80.787501°

FILE #: MND23 N-3H

DRAWING #: MND23 N-3H

SCALE: 1"=2000'

MINIMUM DEGREE OF ACCURACY: 1/2500

PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT H 138: 638.58'

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SIGNED: *[Signature]*

R.P.E.: _____ L.L.S.: P.S. NO. 2269

Waterford Corporate Park II, Suite 101
 2200 Development Drive
 Southley, VA 22680

P. 724-440-1100
 F. 724-440-1108
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ADAM J. WESTFALL
 LICENSED
 No. 2269
 STATE OF WEST VIRGINIA
 PROFESSIONAL SURVEYOR
 PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: BIG TRIBBLE CREEK-OHIO RIVER ELEVATION: 1240'

COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWHATAN POINT, W. VA./OHIO

SURFACE OWNER: HG ENERGY II, APPALACHIA LLC. ACREAGE: 128.6

OIL & GAS ROYALTY OWNER: CNX GAS COMPANY ACREAGE: 128.6

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: POINT PLEASANT / MARCELLUS ESTIMATED DEPTH: TVD: 6,535' ± TMD: 15,631' ±

WELL OPERATOR: HG ENERGY II APPALACHIA, LLC DESIGNATED AGENT: DIANE C. WHITE

Address: 5280 DUPONT ROAD Address: 5280 DUPONT ROAD

City PARKERSBURG State WV Zip Code 26101 City PARKERSBURG State WV Zip Code 26101

DATE: FEBRUARY 25, 2019

OPERATOR'S WELL #: MND23 N-3H

API WELL # 47 51 02409 HGA
 STATE COUNTY PERMIT

PAGE: 1 OF 4

09/17/2021

Bottom Hole is located on topo map 1,022 feet south of Latitude: 39° 50' 00"

Well is located on topo map 6,757 feet south of Latitude: 39° 50' 00"

NOTES:

1. There are no water wells or developed springs within 250' of proposed well.
2. There are no existing buildings within 625' of proposed well.
3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
4. There are no native trout streams within 300' of proposed well.
5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
6. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, and based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.



Bottom Hole is located on topo map 10,532 feet west of Longitude: 80° 45' 00"
 Well is located on topo map 4,414 feet west of Longitude: 80° 45' 00"

DETAIL (REMAINDER OF AFFECTED PARCEL REFERENCE # 300) SCALE: 1"=2,000'



GRID NORTH
 WEST VIRGINIA COORDINATE SYSTEM OF 1983
 NORTH ZONE

SURFACE HOLE LOCATION (SHL)

UTM 17 - NAD83(m)
 N: 4407230.01
 E: 520039.61
 UTM 17 - NAD83(ft)
 N: 14459387.11
 E: 1706163.27
 LAT/LON DATUM-NAD83
 LAT: 39.814815°
 LON: -80.765865°

APPROX. LANDING POINT

UTM 17 - NAD83(m)
 N: 4406908.40
 E: 519700.88
 UTM 17 - NAD83(ft)
 N: 14458331.96
 E: 1705051.98
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BOTTOM HOLE LOCATION

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 E: 518183.61
 UTM 17 - NAD83(ft)
 N: 14465094.38
 E: 1700074.06
 LAT/LON DATUM-NAD83
 LAT: 39.830530°
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LEGEND

	PROPOSED SURFACE HOLE LOCATION ON 7.5' TOPOGRAPHIC MAP
	PROPOSED BOTTOM HOLE LOCATION ON 7.5' TOPOGRAPHIC MAP

FILE #: MND23 N-3H

DRAWING #: MND23 N-3H

SCALE: 1"=2000'

MINIMUM DEGREE OF ACCURACY: 1/2500

PROVEN SOURCE U.S.G.S. MONUMENT
 OF ELEVATION: H 138: 638.59'

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SIGNED:

R.P.E.: _____ L.L.S.: P.S. NO. 2269



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



DATE: FEBRUARY 28, 2019

OPERATOR'S WELL #: MND23 N-3H

API WELL # 47 51 02409
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

PAGE: 2 OF 4

WATERSHED: BIG TRIBBLE CREEK-OHIO RIVER

ELEVATION: 1240'

COUNTY/DISTRICT: MARSHALL / FRANKLIN

QUADRANGLE: POWHATAN POINT, W. VA./OHIO

SURFACE OWNER: HG ENERGY II, APPALACHIA LLC.

ACREAGE: 128.8

OIL & GAS ROYALTY OWNER: CNX GAS COMPANY

ACREAGE: 128.8

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: POINT PLEASANT / MARCELLUS

ESTIMATED DEPTH: TVD: 6,535' ± TMD: 15,631' ±

WELL OPERATOR: HG ENERGY II APPALACHIA, LLC

DESIGNATED AGENT: DIANE C. WHITE

Address: 5260 DUPONT ROAD

Address: 5260 DUPONT ROAD

City PARKERSBURG State WV Zip Code 26101

City PARKERSBURG State WV Zip Code 26101

09/17/2021

158	MCCLINTOCK DALE ET. UX.	TAX MAP NO. 05-0004-0013-0000-0000
159	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0004-0015-0000-0000
182	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0012-0000-0000
183	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0005-0011-0000-0000
184	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0002-0012-0000-0000
193	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0002-0005-0000-0000
220	MORRIS FRED H ET UX	TAX MAP NO. 05-0004-0009-0000-0000
298	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0006-0011-0000-0000
299	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0007-0003-0000-0000
300	OHIO POWER CO.	TAX MAP NO. 05-0005-0003-0000-0000
301	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0005-0000-0000
302	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0006-0000-0000
303	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0001-0000-0000
304	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0015-0000-0000
305	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0013-0000-0000
306	OHIO POWER CO.	TAX MAP NO. 05-0006-0010-0000-0000
307	CNX GAS COMPANY LLC.	TAX MAP NO. 05-0007-0005-0000-0000
308	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0007-0002-0000-0000
309	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0007-0003-0000-0000
310	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0007-0004-0000-0000
311	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0008-0004-0000-0000
313	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0008-0002-0000-0000
314	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0002-0000-0000
315	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0002-0002-0000-0000
316	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0002-0001-0000-0000
317	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0001-0000-0000
318	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0002-0000-0000
319	OHIO POWER CO.	TAX MAP NO. 05-0005-0003-0000-0000
320	SANCHEZ GENEVA BASSETT	TAX MAP NO. 05-0005-0004-0000-0000
322	ROBBINS JAMES E & DIANA C	TAX MAP NO. 05-0005-0005-0000-0000
323	MCGINNIS TIMOTHY L SR ET UX.	TAX MAP NO. 05-0003-0003-0001-0000
324	OHIO POWER CO.	TAX MAP NO. 05-0005-0006-0000-0000
325	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0005-0007-0000-0000
326	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0005-0008-0000-0000
327	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0005-0009-0000-0000
329	MCLEROY COAL COMPANY	TAX MAP NO. 05-0005-0009-0001-0000
330	HEATHERINGTON ARDEN RAY	TAX MAP NO. 05-0002-0013-0001-0000
331	GATTS RICHARD L.	TAX MAP NO. 05-0008-0005-0000-0000
332	MILLER EDWIN C.	TAX MAP NO. 05-0008-0007-0000-0000
333	GATTS RICHARD L.	TAX MAP NO. 05-0008-0008-0000-0000
334	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0002-0003-0000-0000
341	DELBURGGE EMERALD H JR.	TAX MAP NO. 05-0008-0003-0000-0000
342	BERISFORD BESSIE M. EST.	TAX MAP NO. 05-0008-0004-0000-0000
361	NIEMAN FRANCES E.	TAX MAP NO. 05-0008-0004-0001-0000
362	CLARK BEVERLY E.	TAX MAP NO. 05-0009-0001-0001-0000
363	RUCKMAN SHELDON R. ET. AL.	TAX MAP NO. 05-0009-0001-0004-0000
368	OHIO POWER COMPANY	TAX MAP NO. 05-0001-0022-0000-0000
379	ARRUDA JOHN F. ET. UX.	TAX MAP NO. 05-0005-0004-0001-0000
380	WV DIVISION OF NATURAL RESOURCES	NO ASSIGNED TRACT #
382	RUCKMAN MARVIN E. ET. UX.	TAX MAP NO. 05-0009-0001-0003-0000
383	MAXWELL WILLIAM L. SR. ET. UX.	TAX MAP NO. 05-0004-0015-0000-0000
384	HOLMAN TERRY L.	TAX MAP NO. 05-0004-0015-0000-0000
385	RUCKMAN MARVIN E.	TAX MAP NO. 05-0009-0001-0002-0000
386	MAXWELL WILLIAM JR.	TAX MAP NO. 05-0004-0015-0000-0000
387	HOLMAN TERRY L.	TAX MAP NO. 05-0004-0017-0000-0000

388	HOLSTINE BERNARD W. & ROXANN L.	TAX MAP NO. 05-0004-0014-0000-0000
389	HOLSTINE BERNARD W. & ROXANN L.	TAX MAP NO. 05-0004-0014-0002-0000
390	LEGG JAMES R. EST.	TAX MAP NO. 05-0003-0003-0000-0000
391	MCCLINTOCK DALE EDWARD	TAX MAP NO. 05-0003-0006-0000-0000
392	RUCKMAN JESSIE GLADYS - LIFE	TAX MAP NO. 05-0003-0001-0000-0000
393	LEGG JEFFERY L.	TAX MAP NO. 05-0003-0002-0001-0000
394	ANDERSON RHONDA MARIE	TAX MAP NO. 05-0004-0014-0001-0000
402	MCCLINTOCK DALE EDWARD	TAX MAP NO. 05-0003-0005-0000-0000
403	LEGG JAMES R EST	TAX MAP NO. 05-0009-0002-0000-0000
404	WHITE KENNETH E ET UX	TAX MAP NO. 05-0009-0002-0002-0000
405	ARNOLD LLOYD C & JUDITH C	TAX MAP NO. 05-0009-0003-0000-0000
406	FRANCIS JAMES EDWARD ET UX	TAX MAP NO. 05-0005-0006-0000-0000
407	DALLISON LUMBER CO	TAX MAP NO. 06-0002-0001-0000-0000
408	ARRICK DAVID H ET UX	TAX MAP NO. 05-0011-0004-0000-0000
409	RINE WALTER C	TAX MAP NO. 05-0011-0002-0000-0000
410	JACKSON JAMES B JR ET UX	TAX MAP NO. 05-0006-0009-0000-0000
411	WHITT PAUL	TAX MAP NO. 05-0011-0001-0005-0000
412	MOORE RANDYLYN ET AL	TAX MAP NO. 05-0011-0001-0000-0000
413	YOHO RONALD G ET AL	TAX MAP NO. 05-0007-0002-0000-0000
414	ROUPE WILLIAM N ET UX	TAX MAP NO. 05-0007-0003-0000-0000
415	GAMPSBELL BRUCE B	TAX MAP NO. 05-0007-0003-0001-0000
416	ARNOLD LLOYD C. & JUDITH C.	TAX MAP NO. 05-0009-0004-0000-0000
417	STOUT JAMES L.	TAX MAP NO. 05-0009-0007-0000-0000

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Sunday, PA 15143



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LEGEND
REFERENCE NUMBER
FOR SURFACE PARCEL
OWNERSHIP

100

FILE #: MND23 N-3H

DRAWING #: MND23 N-3H

SCALE: 1"=2000'

MINIMUM DEGREE
OF ACCURACY: 1/2500

PROVEN SOURCE U.S.G.S. MONUMENT
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PLACE SEAL HERE

(+) DENOTES LOCATION OF
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TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: BIG TRIBBLE CREEK-OHIO RIVER
COUNTY/DISTRICT: MARSHALL / FRANKLIN

SURFACE OWNER: HG ENERGY II, APPALACHIA LLC.
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PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: POINT PLEASANT / MARCELLUS
WELL OPERATOR: HG ENERGY II APPALACHIA, LLC
Address: 5280 DUPONT ROAD
City PARKERSBURG State WV Zip Code 26101



DATE: FEBRUARY 26, 2019

OPERATOR'S WELL #: MND23 N-3H

API WELL # 47 51 02409
STATE COUNTY PERMIT

ACREAGE: 126.6
ELEVATION: 1240'
QUADRANGLE: POWHATAN POINT, W. VA/OHIO

PAGE: 3 OF 4

09/17/2021

HQ Well Number	MPID	Current Lessee	Original Lessee	Surface Payoff Code					
1	05-0004-0014-0000-0000	MILLER CHARLES W	CHEVRON USA INC	388			Cynthia P. Hopkins, as Trustee of the Cynthia P. Hopkins Revocable Trust	NOBLE ENERGY INC	
		PARSONS PAUL ET UX	CHEVRON USA INC				Elizabeth A. Strusbaugh and James R. Strusbaugh	NOBLE ENERGY INC	
		RUSSELL SHARON LYN	CHEVRON USA INC				Janet and John Blankenship	NOBLE ENERGY INC	
		HUFF TIMOTHY ET UX	CHEVRON USA INC				Jean C. Thomas	NOBLE ENERGY INC	
		ARNOLD LLOYD C ET UX	CHEVRON USA INC				Mary E. Bassett	NOBLE ENERGY INC	
		CRONIN MARY JO	CHEVRON USA INC				Robert B. and Violet Thomas	NOBLE ENERGY INC	
		KURPI, RICHARD ET UX	CHEVRON USA INC				Roger D. and Inken P. Rose	NOBLE ENERGY INC	
		CLIFTON CLARA MAE	CHEVRON USA INC				Ruth Ann and Furman F. Wallace	NOBLE ENERGY INC	
		EDWARDS GEORGE ET UX	CHEVRON USA INC				Ruth E. Bassett Meadows and D.W. Meadows Jr	NOBLE ENERGY INC	
		KYLE DONNA FAE	CHEVRON USA INC				NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
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		Noble Energy, Inc.	CNX Gas Company, LLC				CNX Gas Company, LLC	Noble Energy, Inc.	
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		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC				Margaret Games	CNX Gas Company, LLC	318
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		Edwin C. Miller and Kimberly Ann Miller	Noble Energy, Inc.	332			Charles J. Wiesner	CNX Gas Company, LLC	
		Noble Energy, Inc.	CNX Gas Company, LLC						
		CNX Gas Company, LLC	Noble Energy, Inc.						
		Noble Energy, Inc.	HG ENERGY II APPALACHIA, LLC						
6	NO ASSIGNED TRACT #	WV Division of Natural Resources	Noble Energy, Inc.	380					
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC						
7	05-0008-0006-0000-0000	Richard J. Getts	Chevron USA INC	333					
		Chevron USA INC	HG ENERGY II APPALACHIA, LLC						
8	05-0008-0005-0000-0000	Richard J. Getts	Chevron USA INC	331					
		Chevron USA INC	HG ENERGY II APPALACHIA, LLC						
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC						
9	05-0005-0004-0000-0000	Barbara Kay Ewing and Wilber E. Ewing	NOBLE ENERGY INC	320					
		Charles Howard Bassett JR and Ruby D. Bassett	NOBLE ENERGY INC						

LEGEND
 ① REFERENCE NUMBER FOR MINERAL OWNERSHIP

FILE #: MND23 N-3H
 DRAWING #: MND23 N-3H
 SCALE: 1"=2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT H 138: 638.58'

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

SIGNED: _____
 R.P.E.: _____ L.L.S.: P.S. NO. 2269



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25304

Well Type: Oil Waste Disposal Production Deep Gas Liquid Injection Storage Shallow

WATERSHED: BIG TRIBBLE CREEK-OHIO RIVER ELEVATION: 1240'
 COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWHATAN POINT, W. VA./OHIO
 SURFACE OWNER: HG Energy II, Appalachia LLC. ACREAGE: 126.6
 OIL & GAS ROYALTY OWNER: CNX GAS COMPANY ACREAGE: 126.6

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY) _____

TARGET FORMATION: POINT PLEASANT / MARCELLUS ESTIMATED DEPTH: TVD: 6,535' ± TMD: 15,831' ±
 WELL OPERATOR: HG ENERGY II APPALACHIA, LLC DESIGNATED AGENT: DIANE C. WHITE
 Address: 5260 DUPONT ROAD Address: 5260 DUPONT ROAD
 City PARKERSBURG State WV Zip Code 26101 City PARKERSBURG State WV Zip Code 26101



DATE: FEBRUARY 25, 2019
 OPERATOR'S WELL #: MND23 N-3H
 API WELL # 47 51 02409
 STATE COUNTY PERMIT
 PAGE: 4 OF 4

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WW-6A1
(3/13)

Operator's Well No. _____

**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 Lease Chain **

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

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

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

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

Well Operator: HG Energy II Appalachia, LLC

By: Diane White Diane White RECEIVED
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Its: Agent

WV Department of
Environmental Protection

HG Energy II Appalachia, LLC
MND23 N-3H
Lease Chains

HG Plat Number	MPID	Original Lessor	Original Lessee	Royalty	Book	Page
1)	05-0004-0014-0000-0000	MILLER CHARLES W	CHEVRON USA INC	Not less than 1/8	853	59
		PARSONS PAUL ET UX	CHEVRON USA INC	Not less than 1/8	853	430
		RUSSELL SHARON LYN	CHEVRON USA INC	Not less than 1/8	853	422
		HUFF TIMOTHY ET UX	CHEVRON USA INC	Not less than 1/8	846	47
		ARNOLD J LOYD C ET UX	CHEVRON USA INC	Not less than 1/8	846	39
		CRONIN MARY JO	CHEVRON USA INC	Not less than 1/8	846	43
		KURFIL RICHARD ET UX	CHEVRON USA INC	Not less than 1/8	863	594
		CLIFTON CLARA MAE	CHEVRON USA INC	Not less than 1/8	853	426
		EDWARDS GEORGE ET UX	CHEVRON USA INC	Not less than 1/8	853	418
		KYLE DONNA FAE	CHEVRON USA INC	Not less than 1/8	853	449
		CONNER JUDITH MAY	CHEVRON USA INC	Not less than 1/8	853	445
		SCHEIBELHOOD PAUL ET AL	AB RESOURCES LLC	Not less than 1/8	695	629
		AB RESOURCES LLC NPAR LLC	NPAR LLC Chevron USA INC HG ENERGY II		25 756	484 332
		Chevron USA INC	APPALACHIA, LLC		41	154
2)	05-0009-0003-0000-0000	James Redman Legg II ET AL	HG ENERGY II APPALACHIA, LLC	Not less than 1/8	1041	313
3)	05-0009-0002-0001-0000	Jeffrey L. Legg	HG ENERGY II APPALACHIA, LLC	Not less than 1/8	1041	316
4)	05-0009-0001-0000-0000, 05-0009-0001-0001-0000, 05-0009-0001-0002-0000, 05-0009-0001-0003-0000, 05-0009-0001-0004-0000	Jessi Gladys Ruckman Et Al	Noble Energy, Inc. HG ENERGY II	Not less than 1/8	730	646
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
5)	05-0008-0007-0000-0000	Edwin C. Miller and Kumberly Ann Miller	TH Exploration, LLC HG ENERGY II	Not less than 1/8	957	257
		TH Exploration, LLC	APPALACHIA, LLC		44	63
6)	No tract # assigned	WV Division of Natural Resources	Noble Energy, Inc. HG ENERGY II	Not less than 1/8	865	358
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
7)	05-0008-0006-0000-0000	Richard J. Gatts	Chevron USA INC HG ENERGY II	Not less than 1/8	899	479
		Chevron USA INC	APPALACHIA, LLC	Not less than 1/8	41	154
8)	05-0008-0005-0000-0000	Richard J. Gatts	Chevron USA INC HG ENERGY II	Not less than 1/8	899	479
		Chevron USA INC	APPALACHIA, LLC HG ENERGY II	Not less than 1/8	41	154
		NOBLE ENERGY INC	APPALACHIA, LLC	Fee	39	1
9)	05-0005-0004-0000-0000	Barbara Kay Ewing and Wilber E. Ewing	NOBLE ENERGY INC	Not less than 1/8	842	34

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		Charles Howard Bassett JR and Ruby D. Bassett	NOBLE ENERGY INC	Not less than 1/8	842	1
		Cynthia P. Hopkins, as Trustee of the Cynthia P. Hopkins Revocable Trust	NOBLE ENERGY INC	Not less than 1/8	841	366
		Elizabeth A. Strusbaugh and James R. Strausbaugh	NOBLE ENERGY INC	Not less than 1/8	841	370
		Janet and John Blankenship	NOBLE ENERGY INC	Not less than 1/8	841	368
		Jean C. Thomas	NOBLE ENERGY INC	Not less than 1/8	841	449
		Mary E. Bassett	NOBLE ENERGY INC	Not less than 1/8	841	362
		Robert B. and Violet Thomas	NOBLE ENERGY INC	Not less than 1/8	842	28
		Roger B. and Inken P. Rose	NOBLE ENERGY INC	Not less than 1/8	841	358
		Ruth Ann and Furman F. Wallace	NOBLE ENERGY INC	Not less than 1/8	841	364
		Ruth E. Bassett Meadows and O.W. Meadows Jr	NOBLE ENERGY INC	Not less than 1/8	842	38
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC		39	1
10)	05-0005-0006-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc. HG ENERGY II	Not less than 1/8	829	157
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
11)	05-0005-0003-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc. HG ENERGY II	Not less than 1/8	829	157
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
12)	05-0006-0003-0000-0000	Consolidation Coal Company	CNX Gas Company, LLC	Fee	646	493
		CNX Gas Company, LLC	Noble Energy, Inc. HG ENERGY II	Fee	752	66
		NOBLE ENERGY INC	APPALACHIA, LLC	Fee	39	1
13)	05-0005-0002-0000-0000	Margaret Games	CNX Gas Company, LLC	Not less than 1/8	763	441
		Elizabeth Patterson	CNX Gas Company, LLC	Not less than 1/8	763	437
		Charles J. Wiesner	CNX Gas Company, LLC	Not less than 1/8	763	429
		John Wiesner	CNX Gas Company, LLC	Not less than 1/8	763	433
		Kenneth Schmitt	CNX Gas Company, LLC	Not less than 1/8	763	421
		Mary Ellen Sedon	CNX Gas Company, LLC	Not less than 1/8	763	417
		Alfred Kaczorowski, Jr., & Sharon M. Kaczorowski, his wife	CNX Gas Company, LLC	Not less than 1/8	763	425
		CNX Gas Company, LLC	Noble Energy, Inc. HG ENERGY II		752	66
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1

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

4705102409

July 30, 2021

Kelly Kees
WV DEP
Division of Oil & Gas
601 57th Street
Charleston, WV 25304

RE: Drilling Under Roads – MND23 N-3H (47-051-⁰²⁴⁰⁹~~02231~~)
Franklin District, Marshall County
West Virginia

Dear Ms. Kees -

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

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

Very truly yours,

Diane White

Diane C. White

Enclosures

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

Date of Notice Certification: 08/03/2021

API No. 47- 051 ~~02284~~
Operator's Well No. MND23 N-3H
Well Pad Name: MND23

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>520039.6</u> ✓
County:	<u>Marshall</u> ✓		Northing:	<u>4407230.0</u> ✓
District:	<u>Franklin</u> ✓	Public Road Access:	<u>Nixon Ridge Road (SLS 21/1)</u>	
Quadrangle:	<u>Powhatan Point</u> ✓	Generally used farm name:	<u>CONSOL</u>	
Watershed:	<u>Big Tribble Creek - Ohio River</u> ✓			

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

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

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

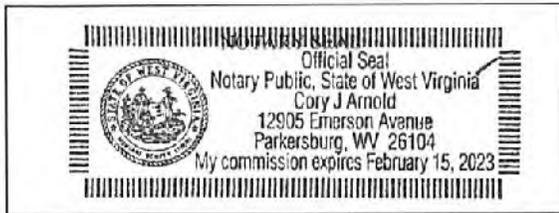
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WV Department of
Environmental Protection
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Certification of Notice is hereby given:

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

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



Subscribed and sworn before me this 3rd day of August, 2021.

Cory J. Arnold Notary Public

My Commission Expires 2-15-2023

Oil and Gas Privacy Notice:

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

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

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.
Date of Notice: 07/30/2021 Date Permit Application Filed: 08/05/2021

Notice of:

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

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

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

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

Notice is hereby provided to:

SURFACE OWNER(s) * *Notice not provided to HG Energy as they are the owner & operator*
Name: HG Energy II Appalachia, LLC
Address: 5260 Dupont Road
Parkersburg, WV 26101
Name: _____
Address: _____

COAL OWNER OR LESSEE
Name: Murray Energy Corporation
Address: 46226 National Road
St Clairsville, OH 43850

COAL OPERATOR
Name: _____
Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: HG Energy II Appalachia, LLC
Address: 5260 Dupont Road
Parkersburg, WV 26101
Name: _____
Address: _____

WATER PURVEYOR(s)
Name: _____
Address: _____

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

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary

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Notice is hereby given:

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

This Notice Shall Include:

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

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

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

Water Well Testing:

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

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and 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.

Well Location Restrictions

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

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factors, if necessary.

Written Comment:

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

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

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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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.

09/17/2021

WW-6A
(5-12)

API NO. 47- 051 - 02409
OPERATOR WELL NO. MND23 N 1H thru N 6H
Well Pad Name: MND23

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

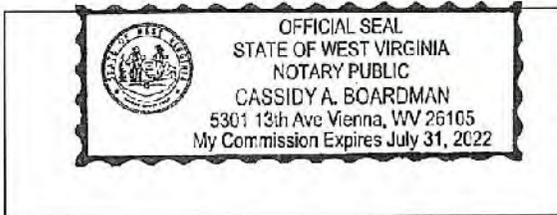
Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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



Subscribed and sworn before me this _____ day of _____.

Cassidy Boardman

Notary Public

My Commission Expires 7/31/2022

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WV Department of
Environmental Protection

09/17/2021

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

WAIVER

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.

Surface Owner Waiver:

I, Eric Grayson, for HG Energy II Appalachia, LLC, hereby state that I have read the notice provisions listed above and hereby waive the notice requirements under West Virginia Code § 22-6A-16(b) for the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>520039.6</u>
County:	<u>Marshall</u>		Northing:	<u>4407230.0</u>
District:	<u>Franklin</u>	Public Road Access:	<u>Nixon Ridge Road (SLS 21/1)</u>	
Quadrangle:	<u>Powhatan Point</u>	Generally used farm name:	<u>CONSOL</u>	
Watershed:	<u>Little Tribble Creek</u>			

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

Signature: 
Date: 07/30/2021

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.

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: 07/29/2021 **Date Permit Application Filed:** 08/06/2021

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) *** Owner not noticed as HG is also the Operator*
(at the address listed in the records of the sheriff at the time of notice):

Name: <u>HG Energy II Appalachia, LLC</u>	Name: _____
Address: <u>5260 Dupont Road</u> <u>Parkersburg, WV 26101</u>	Address: _____

Notice is hereby given:

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

State: <u>West Virginia</u>	UTM NAD 83	Easting: <u>520037.3</u>	
County: <u>Marshall</u>		Northing: <u>4407221.2</u>	
District: <u>Franklin</u>	Public Road Access: <u>Nixon Ridge Road (SLS 21/1)</u>		
Quadrangle: <u>Powhatan Point</u>	Generally used farm name: <u>CONSOL</u>		
Watershed: <u>Little Tribble Creek</u>			

This Notice Shall Include:

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

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

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Oil and Gas Privacy Notice:

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

09/17/2021



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

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

July 29, 2021

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

Subject: DOH Permit for the MND-23 Pad, Marshall County
MND-23 N-3H Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2017-0370 which has been issued to HG Energy II Appalachia for access to the State Road for a well site located off Marshall County Route 21/1 SLS MP 1.88.

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. This letter is valid for permitting purposes for one year from the date of this letter.

Very Truly Yours,

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

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

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List of Frac Additives by Chemical Name and CAS #**MND23 Well Pad (N-1H to N-6H)**

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

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CONSTRUCTION IMPROVEMENT PLANS WITH EROSION AND SEDIMENT CONTROLS HG MND 23 WELL PAD



MOUNDSVILLE
MARSHALL COUNTY
WEST VIRGINIA

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Estimated Gross Material Balance (CY)		
Final Development - Gravel Cytion		
	Cut	Fill
MND 23 Pad	68,452	68,470
Access Road	107	450
TOTAL	68,559	68,920
Total Site Balance		450 Cut
Stripped Topsoil (Unit of Earthwork)		
Est. Swell Factor (20%)		5.17
Est. Topsoil Stockpile Volume (Loose Cy)		1,233
Est. Topsoil To Be Respread on Cut/Fill Slopes		7,420
Minimum Topsoil Stockpile Capacity (Required (C.Y.))		1,850
Minimum Topsoil Stockpile Capacity (Required (C.Y.))		6,010

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

Estimated Gravel Quantities			
	MND 23 Pad	MND 23 Access Road	TOTAL
# of Soil Cement (Paved Ft)	19,533	1,883	21,416
# of Gravel (Paved Ft)	2,126		2,126
Top Coat Chip (Paved Sq)		1,663	1,663

Estimated 12" Compost Fiber Soil Length (L.F./Road)		1,153
Estimated 12" Compost Fiber Soil Length (L.F./Pad)		1,652
Estimated Total 12" Compost Fiber Soil Length (L.F.)		3,015

Estimated Total Limit of Disturbance (Acres)		19,004
Pad Peak Pre-Construction Elevation (F)		1273
Well Pad Sub-base Elevation (Top of Soil Cement) (F)		1239.30
Well Pad Surface Elevation (F)		1237.25

CONSTRUCTION SEQUENCE

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



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

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

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

WELL #	LAT.	LONG.
1	N 39.814735	W 80.765092
2	N 39.814774	W 80.765876
3	N 39.814814	W 80.765865
4	N 39.814854	W 80.765851
5	N 39.814894	W 80.765838
6	N 39.814934	W 80.765824

WV83-NF WELL COORDINATES
WELL ELEVATIONS = 1237.45

B.S. 8-2-21

	LATITUDE	LONGITUDE
MND 23 WELL PAD ACCESS ROAD ENTRANCE	N 39.816883	W 80.764041
MND 11 WELL PAD ACCESS ROAD ENTRANCE	N 39.819895	W 80.757249

RECORD OWNER	RECORD LOT #	RECORD AREA OF LOT	AREA WITHIN LDD
HG ENERGY PROPERTY	1M 4 PARCELL 14	121.531 AC.	18.379 AC.
NIXON RIDGE LN ROW	N/A	N/A	0.025 AC.
TOTAL LIMIT OF DISTURBANCE			19,004 AC.

REVISION	DATE	DESCRIPTION
1	01/24/2019	REVISED WELL PAD DIMENSIONS
2	02/01/2019	REVISED WELL PAD DIMENSIONS
3	02/05/2019	REVISED CELLAR DETAIL
4	04/29/2019	REVISED TO INCLUDE ACCESS TO PUBLIC ROAD
5	05/12/2019	REVISED MATERIAL QUANTITY TABLE
6	05/29/2019	REVISED PER WVDEP COMMENTS



TITLE SHEET
HG MND 23
MARSHALL COUNTY
WEST VIRGINIA
PREPARED FOR
HG ENERGY II APPALACHIA, LLC
PARKERSBURG, WEST VIRGINIA

APPROVED: MFP 07/11/2019
CHECKED: MFP 01/02/2019
DESIGNER: MFP 12/23/2018
PROJECT No: 4003-FA021E37
DRAWING NUMBER: PA007837-01
SHEET 1

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

WEST VIRGINIA CALL BEFORE YOU DIG!
Dial 811 or 800.245.4848
www.1call811.org

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

