



west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://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-4H  
47-051-02410-00-00

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, Chief, is written over the text.

Operator's Well Number: MND23 N-4H  
Farm Name: HG ENERGY II APPALACHIA  
U.S. WELL NUMBER: 47-051-02410-00-00  
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

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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](mailto: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 Operator ID: 494519932 County: Marshall District: Franklin Quadrangle: Powhatan Point

2) Operator's Well Number: MND23 N-4H 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 *Ray Stiles 8-2-21*

8) Proposed Total Vertical Depth: 6535'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 15449'

11) Proposed Horizontal Leg Length: 8387'

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**

<b>TYPE</b>	<b>Size (in)</b>	<b>New or Used</b>	<b>Grade</b>	<b>Weight per ft. (lb/ft)</b>	<b>FOOTAGE: For Drilling (ft)</b>	<b>INTERVALS: Left in Well (ft)</b>	<b>CEMENT: Fill-up (Cu. Ft.)/CTS</b>
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	15449'	15449'	CTS
Tubing							
Liners							

*JEB*  
*8/19/21*

<b>TYPE</b>	<b>Size (in)</b>	<b>Wellbore Diameter (in)</b>	<b>Wall Thickness (in)</b>	<b>Burst Pressure (psi)</b>	<b>Anticipated Max. Internal Pressure (psi)</b>	<b>Cement Type</b>	<b>Cement Yield (cu. ft./k)</b>
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 = 1.18, 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 8,387' lateral length, 15,449' 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. CTS  
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.

WV Department of  
Environmental Protection

\*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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Sucrose	90 - 100	57-50-1																			
EC-1	Gas Migration	Multi-purpose polymer additive used to control free fluid, fluid loss, rheology, and gas migration.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table>	Ingredient name	%	CAS number	No hazardous ingredient														
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Poz (Fly Ash)	Base	A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7	Calcium oxide	1 - 5	1305-78-8									
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R-3	Retarder	A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Organic acid salt</td> <td>40 - 50</td> <td>Trade secret.</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Organic acid salt	40 - 50	Trade secret.												
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S-5	Surfactant	Used to water wet casing and formation to facilitate cement bonding.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>2-Butoxyethanol</td> <td>20 - 30</td> <td>111-76-2</td> </tr> <tr> <td>Proprietary surfactant</td> <td>10 - 20</td> <td>Trade secret.</td> </tr> <tr> <td>D-Glucopyranose, oligomeric, C10-16-alkyl glycosides</td> <td>5 - 10</td> <td>110615-47-9</td> </tr> <tr> <td>Alkylarylsulfonate amine salt</td> <td>1 - 5</td> <td>Trade secret.</td> </tr> <tr> <td>Polyoxyalkylenes</td> <td>0.1 - 1</td> <td>Trade secret.</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	2-Butoxyethanol	20 - 30	111-76-2	Proprietary surfactant	10 - 20	Trade secret.	D-Glucopyranose, oligomeric, C10-16-alkyl glycosides	5 - 10	110615-47-9	Alkylarylsulfonate amine salt	1 - 5	Trade secret.	Polyoxyalkylenes	0.1 - 1	Trade secret.
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Office of Surface Water & Gas

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WV Department of Environmental Protection



MND23 N-4H  
Marcellus Shale Horizontal  
Marshall County, WV

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MND23 N-4H SHL

14459401.62N 1706167.06E

Ground Elevation 1240' (RKB) 25'

MND23 N-4H LP

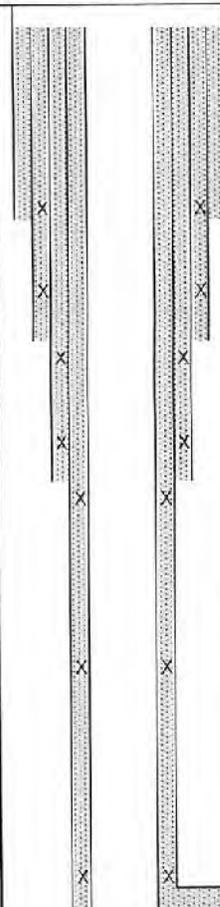
14458773.14N 1705658.51E

Azm 323.643°

MND23 N-4H BHL

14465527.17N 1700686.77E

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=2110 psi
17.5'	13-3/8" 54.5# J-55 BTC	Fresh Water Surface Casing Coal(s)	538', 801', 898', 947' 0 917' - 922'	1150	AIR	15.6 ppg Class A Neat 94#/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
12.25'	9-5/8" 40# J-55 BTC	Big Lime / Big Injun Pocono 5th Sand Gordon Intermediate Casing	2170 / 2274 2479 2840 3052 0	2263 / 2305 1150	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=3950 psi
8.75" Vertical	5-1/2" 20# P-110 HP CDC HTQ	Rhinestreet	596'	5253	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
8.75" / 8.5" Curve		Cashaqua	6253	6317	Air then 11.5ppg 12.5ppg SOBMs				
		Middlesex	6317	6340					
		West River	6340	6407					
		Burkett	6407	6425					
		Tully	6425	6454					
8.5" Lateral		Hamilton	6454	6489	11.5ppg 12.5ppg SOBMs				
		Marcellus	6489	6545					
		LP TMD / TVD	15448	6535					
		Onondaga	6545						

LP @ 6535' TVD / 7058' MD

8.5" Hole - Cemented Long String  
5-1/2" 20# P-110 HP CDC HTQ

+/-8390' ft Lateral

TD @ +/-6535' TVD  
+/-15448' MD

X=Centralizers

4705102410

WW-9  
(4/16)

API Number 47 - \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. MND23 N-4H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name HG Energy II Appalachia, LLC OP Code 494501907

Watershed (HUC 10) Big Tribble Creek - Ohio River Quadrangle Powhatan Point 7.5'

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

Will a pit be used? Yes  No

If so, please describe anticipated pit waste: NA

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

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

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

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

-Landfill or offsite name/permit number? See Attached

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

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

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

Company Official Signature Diane White

Company Official (Typed Name) Diane White

Company Official Title Agent

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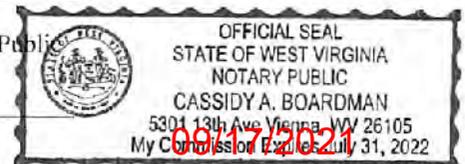
AUG 12 2021

WV Department of  
Environmental Protection

Subscribed and sworn before me this, 29th day of July, 2021

Cassidy Boardman Notary Public

My commission expires 7/31/2022



## 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  
Cochran, 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  
Collers, WV 26035  
304-748-0014

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

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

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

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

**Water Haul off Companies:**

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

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  
11942 Veterans Memorial Highway  
Masontown, WV 26542

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

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

**Disposal Locations:**

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

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

Adams #1 (Buckeye Brine, LLC)  
Permit # 34-031-2-7177  
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 Rte. 286 Hwy. E, Suite 303  
Indiana, PA 15701

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

Equipment Transport  
1 Tyler Court  
Carlisle, PA 17015

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

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

Nichols 1-A (SWIW #13)  
Permit # 3862  
300 Cherrington Pkwy, Suite 200  
Coraopolis, PA 15108  
412-329-7275

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

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 43832  
740-763-3966

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

SOS D#1 (SWIW #12)  
Permit # 34-059-2-4202-00-00  
Silcor Offfield Services, Inc.  
2939 Hubbard Road  
Youngstown, PH 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 # 34-083-2-4197-00-00  
Elkhead Gas & Oil Company  
12168 Marne Rd. NE  
Newark, OH 43055  
740-763-3966

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09/17/2021

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: *Bay Stetson*

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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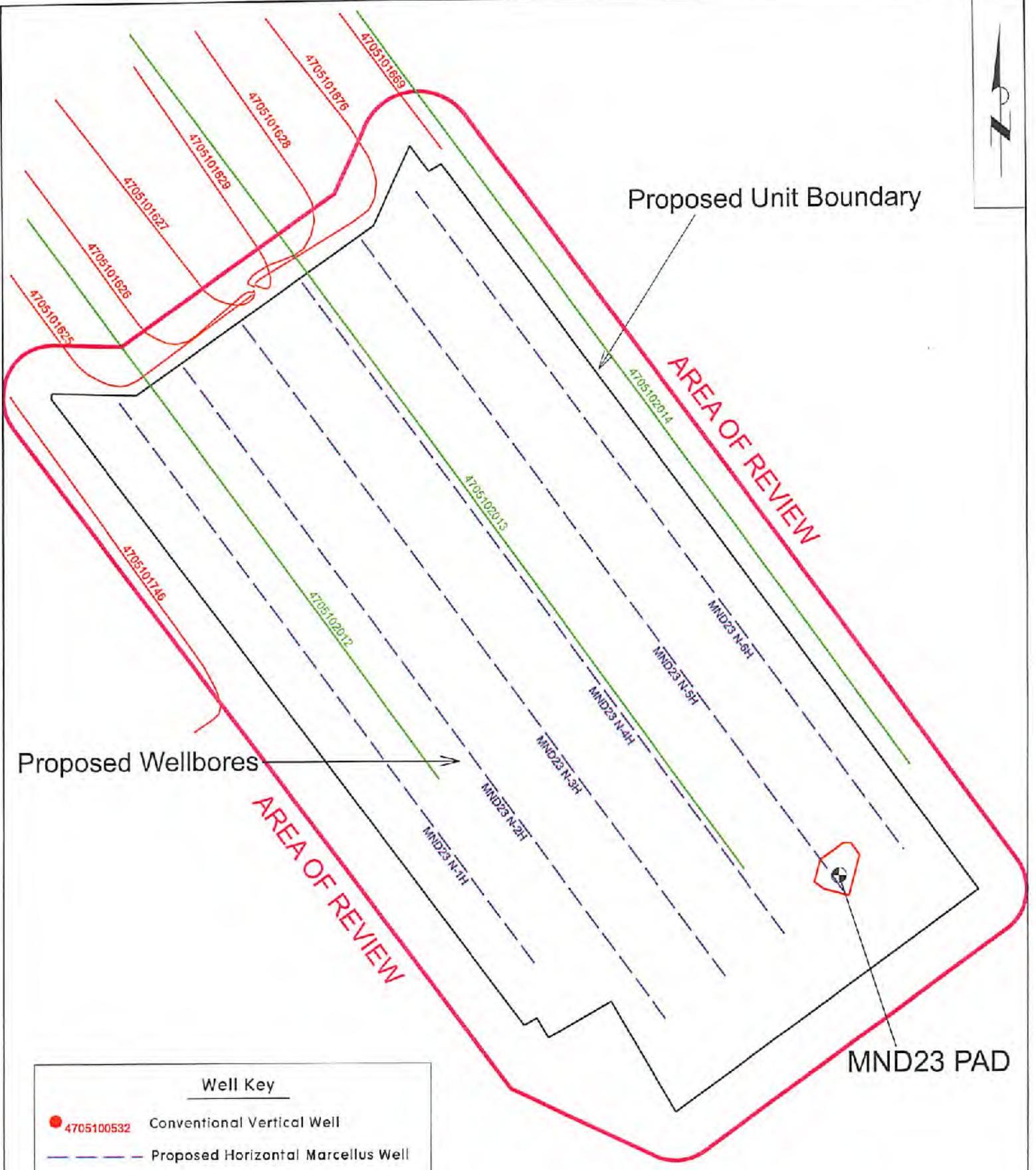
AUG 12 2021

WV Department of  
Environmental Protection

Title: Oil & Gas Inspector

Date: 8-2-21

Field Reviewed? (  ) Yes (  ) No



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

NOTE:  
See Attached Spreadsheet for Well Data

DATA SOURCE  
WVGES Data Set - 2020

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AUG 12 2021  
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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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WV Department of  
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

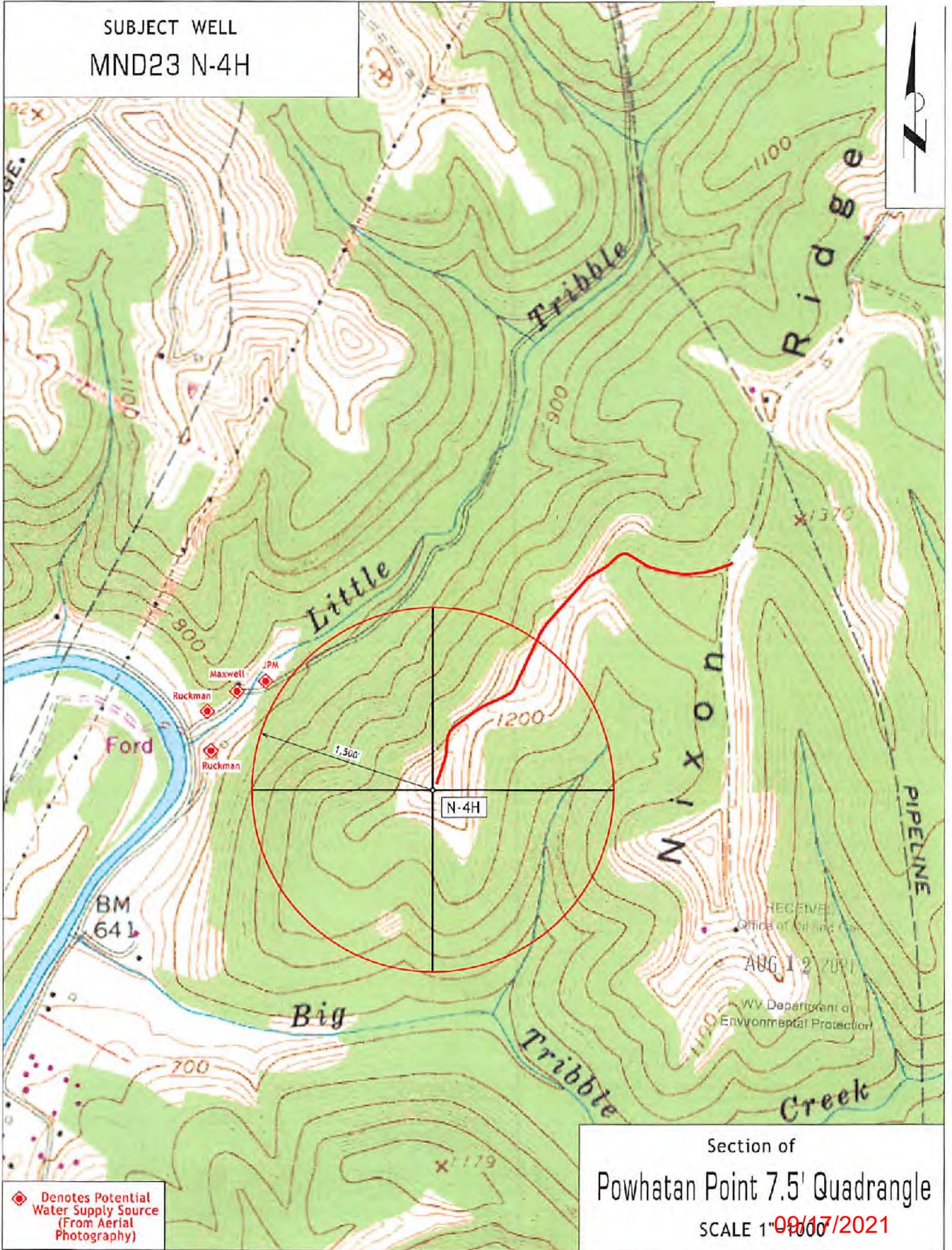
*Bay Dolly 8-2-21*  
HG Energy II Appalachia, LLC.

5260 Dupont Road  
Parkersburg, WV 26101

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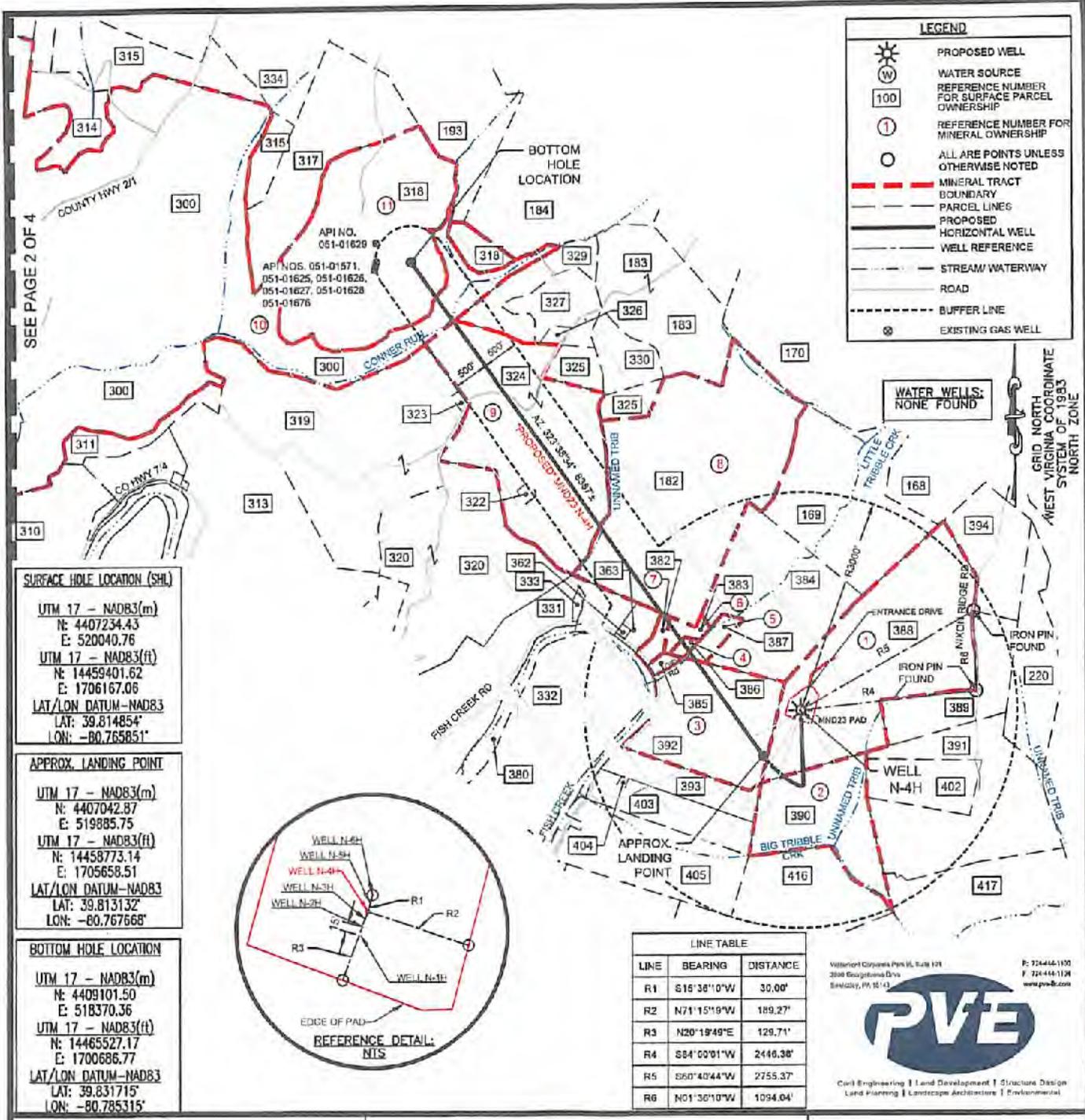
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SUBJECT WELL  
MND23 N-4H



◆ Denotes Potential Water Supply Source (From Aerial Photography)

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



Wellcraft Corporate Park, Suite 101  
 2848 Georgetown Drive  
 Shenandoah, VA 26164

PVE

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 Land Planning | Landscape Architecture | Environmental

P: 754-44-1100  
 F: 754-44-1124  
 www.pve.com

FILE # MND23 N-4H

DRAWING # MND23 N-4H

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

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: 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: 15,449' ±

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 26, 2019

OPERATOR'S WELL #: MND23 N-4H

API WELL # 47 51 02410

STATE COUNTY PERMIT

PAGE: 1 OF 4

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Bottom Hole is located on topo map 590 feet south of Latitude: 39° 50' 00"

Well is located on topo map 6,731 feet south of Latitude: 39° 50' 00"

Bottom Hole is located on topo map 9,918 feet west of Longitude: 80° 45' 00"  
Well is located on topo map 4,453 feet west of Longitude: 80° 45' 00"

NOTES

- There are no water wells or developed springs within 250' of proposed well
- There are no existing buildings within 625' of proposed well
- Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
- There are no native trout streams within 300' of proposed well.
- Proposed well is greater than 1000' from surface/groundwater intake or public water supply
- 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

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



**SURFACE HOLE LOCATION (SHL)**

UTM 17 - NAD83(m)  
N: 4407234.43  
E: 520040.76

UTM 17 - NAD83(ft)  
N: 14459401.62  
E: 1706167.06

LAT/LON DATUM-NAD83  
LAT: 39.814854°  
LON: -80.765851°

**APPROX. LANDING POINT**

UTM 17 - NAD83(m)  
N: 4407042.67  
E: 519885.75

UTM 17 - NAD83(ft)  
N: 14458773.14  
E: 1705658.51

LAT/LON DATUM-NAD83  
LAT: 39.813132°  
LON: -80.767668°

**BOTTOM HOLE LOCATION**

UTM 17 - NAD83(m)  
N: 4409101.50  
E: 518370.36

UTM 17 - NAD83(ft)  
N: 14465527.17  
E: 1700686.77

LAT/LON DATUM-NAD83  
LAT: 39.831715°  
LON: -80.785315°

Westwood Corporate Park & Suite 101  
2608 Bechtelwood Drive  
Sellersburg, PA 17133

P: 724-411-1103  
F: 724-411-1184  
www.pve-dc.com



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Land Planning | Landscape Architecture | Environmental

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

FILE #: MND23 N-4H

DRAWING #: MND23 N-4H

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 26, 2019

OPERATOR'S WELL #: MND23 N-4H

API WELL # 47 51 02410

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

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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: 15,449' ±

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



HG Pit Number	MRID	Original Lessor	Original Lessee	Surface Parcel Code
1	05-0004-0014-0000-0000	MILLER CHARLES W	CHEVRON USA INC	388
		PARSONS PAUL ET UX	CHEVRON USA INC	
		RUSSELL SHARON LYN	CHEVRON USA INC	
		HUFF TIMOTHY ET UX	CHEVRON USA INC	
		ARNOLD LLOYD C ET UX	CHEVRON USA INC	
		CRONIN MARY JO	CHEVRON USA INC	
		KURPIL RICHARD ET UX	CHEVRON USA INC	
		CLIFTON CLARA MAE	CHEVRON USA INC	
		EDWARDS GEORGE ET UX	CHEVRON USA INC	
		KYLE DONNA FAE	CHEVRON USA INC	
		CONNOR JUDITH MAY	CHEVRON USA INC	
		SCHIBELHOOD PAUL ET AL	AB RESOURCES LLC	
		AB RESOURCES LLC	NPAR LLC	
NPAR LLC	Chevron USA INC			
	Chevron USA INC	HG ENERGY II APPALACHIA, LLC		
2	05-0009-0003-0000-0000	James Redman Legg II ET AL	Noble Energy, Inc.	390
		Noble Energy, Inc.	CNX Gas Company, LLC	
		CNX Gas Company, LLC	Noble Energy, Inc.	
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
3	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 Buckman Et Al	Noble Energy, Inc.	392, 362, 385, 382, 363
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
4	05-0004-0019-0000-0000	William L. Maxwell JR	TriEnergy Holdings	386
		TriEnergy Holdings	Chevron USA INC	
		Chevron USA INC	HG ENERGY II APPALACHIA, LLC	
5	05-0004-0017-0000-0000	Terry Holman	TriEnergy Holdings	387
		TriEnergy Holdings	Chevron USA INC	
		Chevron USA INC	HG ENERGY II APPALACHIA, LLC	
6	05-0004-0018-0000-0000	William L. Maxwell JR	TriEnergy Holdings	383
		TriEnergy Holdings	Chevron USA INC	
		Chevron USA INC	HG ENERGY II APPALACHIA, LLC	
7	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 Buckman Et Al	Noble Energy, Inc.	392, 362, 385, 382, 363
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
8	05-0005-0012-0000-0000	Barbara Kay Ewing and Wilber E. Ewing	NOBLE ENERGY INC	182

		Charles Howard Bassett JR and Ruby D. Bassett	NOBLE ENERGY INC	
		Cynthia P. Hopkins, as Trustee of the Cynthia P. Hopkins Revocable Trust	NOBLE ENERGY INC	
		Elizabeth A. Strusbaugh and James R. Strusbaugh	NOBLE ENERGY INC	
		Janet and John Blankenship	NOBLE ENERGY INC	
		Jean C. Thomas	NOBLE ENERGY INC	
		Mary E. Bassett	NOBLE ENERGY INC	
		Robert B. and Violet Thomas	NOBLE ENERGY INC	
		Roger B. and Inken P. Rose	NOBLE ENERGY INC	
		Ruth Ann and Furman F. Wallace	NOBLE ENERGY INC	
		Ruth E. Bassett Meadows and O.W. Meadows Jr	NOBLE ENERGY INC	
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
9	05-0005-0006-0000-0000	AEP Generation Resources Inc and Kentucky Power Company	Noble Energy, Inc.	324
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
10	05-0005-0003-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc.	300
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
11	05-0005-0002-0000-0000	Margaret Games	CNX Gas Company, LLC	318
		Elizabeth Patterson	CNX Gas Company, LLC	
		Charles J. Wiesner	CNX Gas Company, LLC	
		John Wiesner	CNX Gas Company, LLC	
		Kenneth Schmitt	CNX Gas Company, LLC	
		Mary Ellen Sedon	CNX Gas Company, LLC	
		Alfred Kaczorowski, Jr., & Sharon M. Kaczorowski, his wife	CNX Gas Company, LLC	
		CNX Gas Company, LLC	Noble Energy, Inc.	
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	

Wellhead Corrosion Part III, Sub 101  
2000 Georgetown Drive  
Brevard, PA 15113

P: 724-444-1100  
F: 724-444-1104  
www.pve.com



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LEGEND	
1	REFERENCE NUMBER FOR MINERAL OWNERSHIP

FILE #: MND23 N-4H  
DRAWING #: MND23 N-4H  
SCALE: 1"=2000'  
MINIMUM DEGREE OF ACCURACY: 1/2500  
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT H 138: 636.58'

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(+) 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

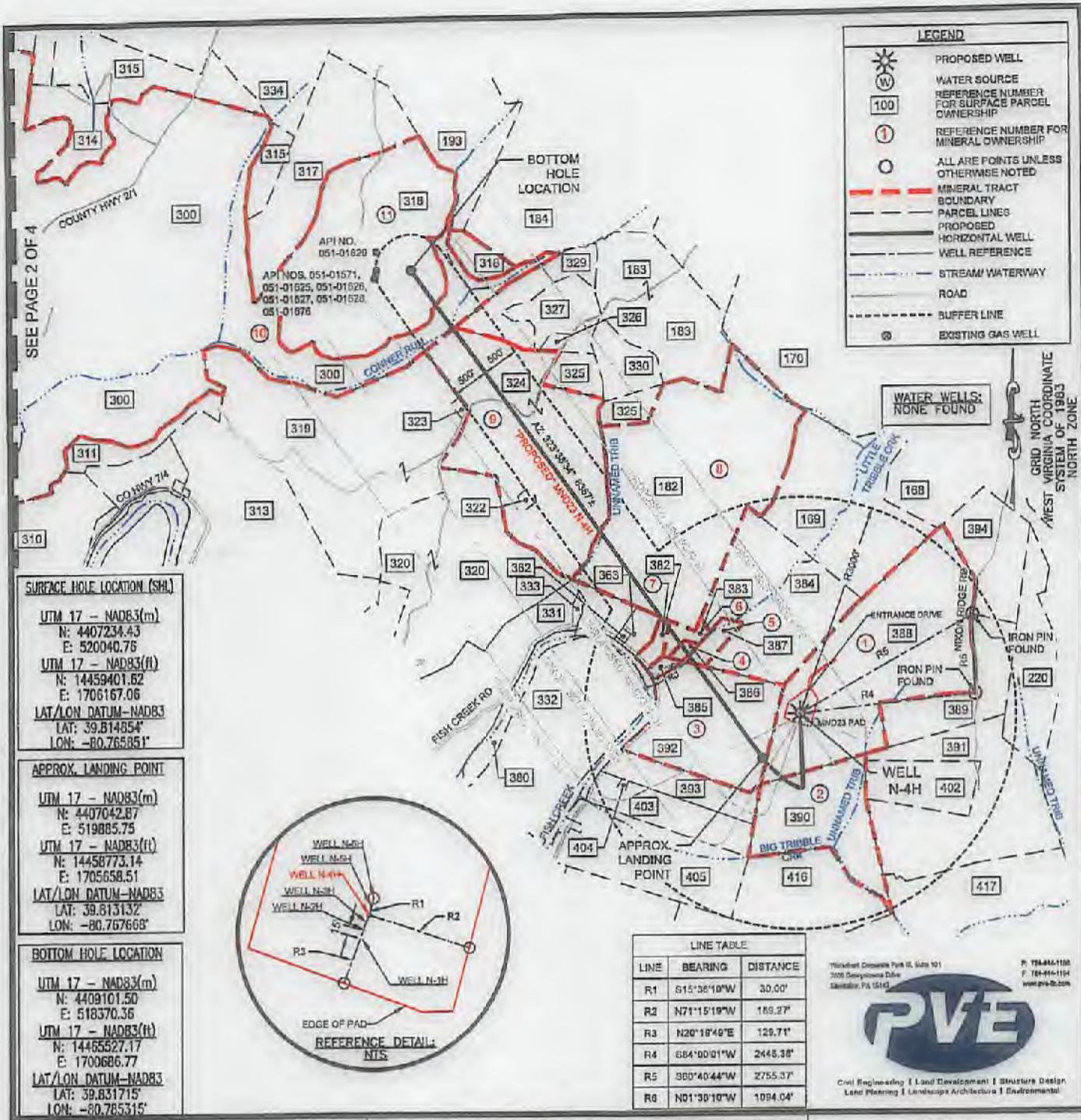
WATERSHED: BIG TRIBBLE CREEK-OHIO RIVER ELEVATION: 1240'  
COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWHATAN POINT, W. VA./OHIO

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: 15,449' ±  
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

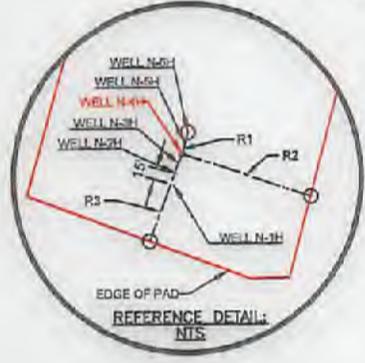
DATE: FEBRUARY 26, 2019  
OPERATOR'S WELL #: MND23 N-4H RECEIVED  
API WELL # 47 51 Office of Oil and Gas  
STATE COUNTY ABINGDON 02410  
WV Department of Environmental Protection  
PAGE: 4 OF 4  
09/17/2021



**SURFACE HOLE LOCATION (SHL)**  
 UTM 17 - NAD83(m)  
 N: 4407234.43  
 E: 520040.76  
 UTM 17 - NAD83(ft)  
 N: 14459401.62  
 E: 1706167.06  
 LAT/LON DATUM-NAD83  
 LAT: 39.814854°  
 LON: -80.765951°

**APPROX. LANDING POINT**  
 UTM 17 - NAD83(m)  
 N: 4407042.87  
 E: 519885.75  
 UTM 17 - NAD83(ft)  
 N: 14458773.14  
 E: 1705658.51  
 LAT/LON DATUM-NAD83  
 LAT: 39.813132°  
 LON: -80.767668°

**BOTTOM HOLE LOCATION**  
 UTM 17 - NAD83(m)  
 N: 4409101.50  
 E: 518370.36  
 UTM 17 - NAD83(ft)  
 N: 14465527.17  
 E: 1700686.77  
 LAT/LON DATUM-NAD83  
 LAT: 39.831715°  
 LON: -80.765315°



LINE	BEARING	DISTANCE
R1	S15°36'10"W	30.00'
R2	N71°15'19"W	169.27'
R3	N20°18'49"E	129.71'
R4	S84°00'01"W	2448.38'
R5	S60°40'44"W	2755.37'
R6	N01°30'10"W	1094.04'

Horizontal Control Point ID: 501  
 2008 Surveying Data  
 Sandusky, PA 15143

PVE  
 Civil Engineering | Land Development | Structure Design  
 Land Planning | Landscape Architecture | Environmental

P. 784-441100  
 F. 784-441104  
 www.pve.com

FILE #: MND23 N-4H  
 DRAWING #: MND23 N-4H  
 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

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  
 COUNTY/DISTRICT: MARSHALL / FRANKLIN  
 SURFACE OWNER: HG ENERGY II, APPALACHIA LLC  
 OIL & GAS ROYALTY OWNER: CNX GAS COMPANY



DATE: FEBRUARY 26, 2019  
 OPERATOR'S WELL #: MND23 N-4H  
 API WELL # 47 51 02410 H6A  
 STATE COUNTY PERMIT

ACREAGE: 125.6  
 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  
 WELL OPERATOR: HG ENERGY II APPALACHIA, LLC  
 Address: 5260 DUPONT ROAD  
 City PARKERSBURG State WV Zip Code 26101

ESTIMATED DEPTH: TVD: 6,535' ± TMD: 15,449' ±  
 DESIGNATED AGENT: DIANE C. WHITE  
 Address: 5260 DUPONT ROAD  
 City PARKERSBURG State WV Zip Code 26101

09/17/2021

Bottom Hole is located on topo map 590 feet south of Latitude: 39° 50' 00"

Well is located on topo map 6,731 feet south of Latitude: 39° 50' 00"

Bottom Hole is located on topo map 9,918 feet west of Longitude: 80° 45' 00"  
 Well is located on topo map 4,453 feet west of Longitude: 80° 45' 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 herein. 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.

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)

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N: 4407234.43  
E: 520040.76  
UTM 17 - NAD83(ft)  
N: 14459401.62  
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APPROX. LANDING POINT

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BOTTOM HOLE LOCATION

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UTM 17 - NAD83(ft)  
N: 14465527.17  
E: 1706686.77  
LAT/LON DATUM-NAD83  
LAT: 39.831715°  
LON: -80.785315°

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

Waterford Corridor Plat II, Sub 1B  
2000 Davenport Drive  
Seattle, WA 98102

P: 724-444-1100  
F: 724-444-1191  
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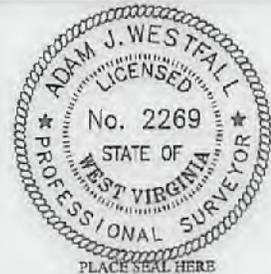


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FILE #: MND23 N-4H  
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SIGNED:   
 R.P.E.: \_\_\_\_\_ L.L.S.: P.S. NO. 2269



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



DATE: FEBRUARY 26, 2019  
 OPERATOR'S WELL #: MND23 N-4H  
 API WELL # 47 51 02410  
 STATE COUNTY PERMIT

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

WATERSHED: BIG TRIBBLE CREEK-CHIO 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

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 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

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
170	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0004-0001-0000-0000
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. 05-0005-0011-0000-0000
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. 05-0006-0005-0000-0000
302	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0006-0005-0000-0000
303	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0006-0001-0000-0000
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. 05-0006-0004-0000-0000
313	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0002-0000-0000
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. 05-0005-0005-0000-0000
325	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0005-0007-0000-0000
326	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0005-0006-0000-0000
327	FRANKLIN REAL ESTATE CO.	TAX MAP NO. 05-0005-0009-0000-0000
329	MOELROY 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. 05-0008-0005-0000-0000
334	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0002-0003-0000-0000
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
380	WV DIVISION OF NATURAL RESOURCES	REFERENCE NO. Q-091860000
382	RUCKMAN MARVIN E. ET. UX.	TAX MAP NO. 05-0009-0001-0003-0000
383	MAXWELL WILLIAM L. SR. ET. UX.	TAX MAP NO. 05-0004-0018-0000-0000
384	HOLMAN TERRY L.	TAX MAP NO. 05-0004-0016-0000-0000
385	RUCKMAN MARVIN E.	TAX MAP NO. 05-0009-0001-0002-0000
386	MAXWELL WILLIAM JR.	TAX MAP NO. 05-0004-0018-0000-0000
387	HOLMAN TERRY L.	TAX MAP NO. 05-0004-0017-0000-0000

388	HOLSTINE BERNARD W. & ROXANN L.
389	HOLSTINE BERNARD W. & ROXANN L.
390	LEGG JAMES R. EST.
391	MCCLINTOCK DALE EDWARD
392	RUCKMAN JESSIE GLADYS - LIFE
393	LEGG JEFFERY L.
394	ANDERSON RHONDA MARIE
402	MCCLINTOCK DALE EDWARD
403	LEGG JAMES R. EST
404	WHITE KENNETH E ET UX.
405	ARNOLD LLOYD C & JUDITH C.
416	ARNOLD LLOYD C. & JUDITH C.
417	STOUT JAMES L.

TAX MAP NO. 05-0004-0014-0000-0000
TAX MAP NO. 05-0004-0014-0002-0000
TAX MAP NO. 05-0009-0003-0000-0000
TAX MAP NO. 05-0009-0006-0000-0000
TAX MAP NO. 05-0009-0001-0000-0000
TAX MAP NO. 05-0009-0002-0001-0000
TAX MAP NO. 05-0004-0014-0001-0000
TAX MAP NO. 05-0009-0005-0000-0000
TAX MAP NO. 05-0009-0002-0000-0000
TAX MAP NO. 05-0009-0002-0002-0000
TAX MAP NO. 05-0009-0005-0000-0000
TAX MAP NO. 05-0009-0004-0000-0000

Waterford Concrete Park III, Suite 128  
2000 Springwood Drive  
Greenville, PA 17143

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F. 724-441-1104  
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LEGEND

100 REFERENCE NUMBER FOR SURFACE PARCEL OWNERSHIP

FILE #: MND23 N-4H  
DRAWING #: MND23 N-4H  
SCALE: 1"=2000'  
MINIMUM DEGREE OF ACCURACY: 1/2500  
PROVEN SOURCE U.S.G.S. MONUMENT OF ELEVATION: H 138: 638.58'

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



DATE: FEBRUARY 26, 2019  
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API WELL # 47 51 02410  
STATE COUNTY PERMIT

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

PAGE: 3 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

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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

Well Number	Well Name	Operator	County	Acres
1	05-0004-0014-0000-0000	MILLER CHARLES W	CHEVRON USA INC	388
		PARSONS PAUL ET UX	CHEVRON USA INC	
		RUSSELL SHARON LYN	CHEVRON USA INC	
		HUFF TIMOTHY ET UX	CHEVRON USA INC	
		ARNOLD LLOYD C ET UX	CHEVRON USA INC	
		CRONIN MARY JO	CHEVRON USA INC	
		KURPIL RICHARD ET UX	CHEVRON USA INC	
		CLIFTON CLARA MAE	CHEVRON USA INC	
		EDWARDS GEORGE ET UX	CHEVRON USA INC	
		KYLE DONNA FAE	CHEVRON USA INC	
		CONNOR JUDITH MAY	CHEVRON USA INC	
		SCHIBELHOOD PAUL ET AL	AB RESOURCES LLC	
		AB RESOURCES LLC	NPAR LLC	
	NPAR LLC	Chevron USA INC		
	Chevron USA INC	HG ENERGY II APPALACHIA, LLC		
2	05-0009-0003-0000-0000	James Redman Legg II ET AL	Noble Energy, Inc.	390
		Noble Energy, Inc.	CNX Gas Company, LLC	
		CNX Gas Company, LLC	Noble Energy, Inc.	
	NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC		
3	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, 392, 385, 392, 363
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
4	05-0004-0019-0000-0000	William L. Maxwell JR	TriEnergy Holdings	386
		TriEnergy Holdings	Chevron USA INC	
	Chevron USA INC	HG ENERGY II APPALACHIA, LLC		
5	05-0004-0017-0000-0000	Terry Holman	TriEnergy Holdings	387
		TriEnergy Holdings	Chevron USA INC	
	Chevron USA INC	HG ENERGY II APPALACHIA, LLC		
6	05-0004-0018-0000-0000	William L. Maxwell JR	TriEnergy Holdings	383
		TriEnergy Holdings	Chevron USA INC	
		Chevron USA INC	HG ENERGY II APPALACHIA, LLC	
7	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, 392, 385, 392, 363
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
8	05-0005-0012-0000-0000	Barbara Kay Ewing and Wilber E. Ewing	NOBLE ENERGY INC	182

		Charles Howard Bassett JR and Ruby D. Bassett	NOBLE ENERGY INC	
		Cynthia P. Hopkins, as Trustee of the Cynthia P. Hopkins Revocable Trust	NOBLE ENERGY INC	
		Elizabeth A. Strussbaugh and James R. Strussbaugh	NOBLE ENERGY INC	
		Janet and John Blankenship	NOBLE ENERGY INC	
		Jean C. Thomas	NOBLE ENERGY INC	
		Mary E. Bassett	NOBLE ENERGY INC	
		Robert B. and Violet Thomas	NOBLE ENERGY INC	
		Roger B. and Inken P. Rose	NOBLE ENERGY INC	
		Ruth Ann and Furman F. Wallace	NOBLE ENERGY INC	
		Ruth E. Bassett Meadows and O.W. Meadows Jr	NOBLE ENERGY INC	
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
9	05-0005-0006-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc.	324
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
10	05-0005-0003-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc.	300
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	
11	05-0005-0002-0000-0000	Margaret Games	CNX Gas Company, LLC	318
		Elizabeth Patterson	CNX Gas Company, LLC	
		Charles J. Wiesner	CNX Gas Company, LLC	
		John Wiesner	CNX Gas Company, LLC	
		Kenneth Schmitt	CNX Gas Company, LLC	
		Mary Ellen Sedon	CNX Gas Company, LLC	
		Alfred Kaczorowski, Jr., & Sharon M. Kaczorowski, his wife	CNX Gas Company, LLC	
		CNX Gas Company, LLC	Noble Energy, Inc.	
		NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	

Wellhead Capacity Plan II, Unit 101  
2000 Georgetown Court  
Martinsburg, W. Va. 26153

P. 724-66-1100  
F. 724-66-9104  
www.pve.com



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Load Planning | Landscape Architecture | Environmental

LEGEND

1

REFERENCE NUMBER FOR MINERAL OWNERSHIP

FILE #: MND23 N-4H

DRAWING #: MND23 N-4H

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DATE: FEBRUARY 26, 2019

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STATE COUNTY PERMIT

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ELEVATION: 1240'

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City PARKERSBURG State WV Zip Code 26101

City PARKERSBURG State WV Zip Code 26101

09/17/2021

PAGE: 4 OF 4

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*  
 Its: Agent

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Page 1 of \_\_\_\_\_

HG Energy II Appalachia, LLC - MND23 N-4H Lease Chain

HG Plat Number	MPIID	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	420
		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 LLOYD 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
		KURPIL RICHARD ET UX	CHEVRON USA INC	Not less than 1/8	853	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
		CONNOR 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		25	484
		NPAR LLC	Chevron USA INC HG ENERGY II		756	332
Chevron USA INC	APPALACHIA, LLC		41	154		
2)	05-0009-0003-0000-0000	James Redman Legg II ET AL	Noble Energy, Inc.	Not less than 1/8	879	580
		Noble Energy, Inc.	CNX Gas Company, LLC		36	395
		CNX Gas Company, LLC	Noble Energy, Inc. HG ENERGY II		37	169
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
3)	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	546
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
4)	05-0004-0019-0000-0000	William L. Maxwell JR	TriEnergy Holdings	Not less than 1/8	730	644
		TriEnergy Holdings	Chevron USA INC HG ENERGY II		28	239
		Chevron USA INC	APPALACHIA, LLC		41	154
5)	05-0004-0017-0000-0000	Terry Holman	TriEnergy Holdings	Not less than 1/8	721	557
		TriEnergy Holdings	Chevron USA INC HG ENERGY II		28	239
		Chevron USA INC	APPALACHIA, LLC		41	154
6)	05-0004-0018-0000-0000	William L. Maxwell JR	TriEnergy Holdings	Not less than 1/8	730	644
		TriEnergy Holdings	Chevron USA INC HG ENERGY II		28	239
		Chevron USA INC	APPALACHIA, LLC		41	154
7)	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
8)	05-0005-0012-0000-0000	Barbara Kay Ewing and Wilber E. Ewing	NOBLE ENERGY INC	Not less than 1/8	842	34
		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. Strusbaugh	NOBLE ENERGY INC	Not less than 1/8	841	370
		Janet and John Blankenship	NOBLE ENERGY INC	Not less than 1/8	841	358
		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	352
		Robert B. and Violet Thomas	NOBLE ENERGY INC	Not less than 1/8	842	28
		Roger B. and Inker P. Rose	NOBLE ENERGY INC	Not less than 1/8	841	358

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		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 HG ENERGY II	Not less than 1/8	842	38
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
9)	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
10)	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
11)	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

---

July 30, 2021

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

RE: Drilling Under Roads – MND23 N-4H (47-051-<sup>02410</sup>~~02218~~)  
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](mailto:dwhite@hgenergyllc.com) or 304-420-1119.

Very truly yours,

*Diane White*

Diane C. White

Enclosures

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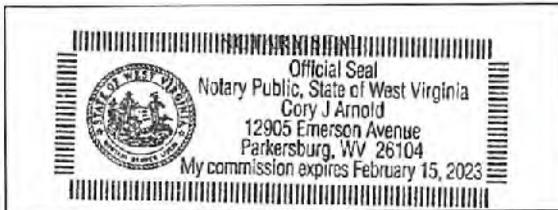
09/17/2021



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

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WW-6A  
(5-12)

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

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 sent to HG - owner & operator  
 Name: HG Energy II Appalachia, LLC  
 Address: 5260 Dupont Road  
 Parkersburg, WV 26101

COAL OWNER OR LESSEE  
 Name: Murray Energy Corporation  
 Address: 46226 National Road  
 St Clairsville, OH 43950

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

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

WATER PURVEYOR(s)  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_

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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WV Department of  
Environmental Protection

**Notice is hereby given:**

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

**This Notice Shall Include:**

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

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall 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 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**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 not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such

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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 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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

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

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

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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.

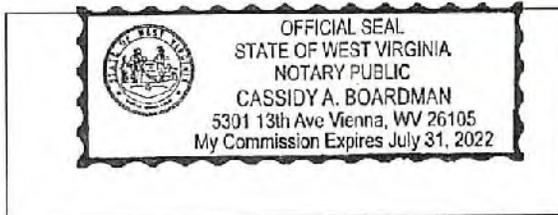
**Notice is hereby given by:**

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](mailto:depprivacyofficer@wv.gov).



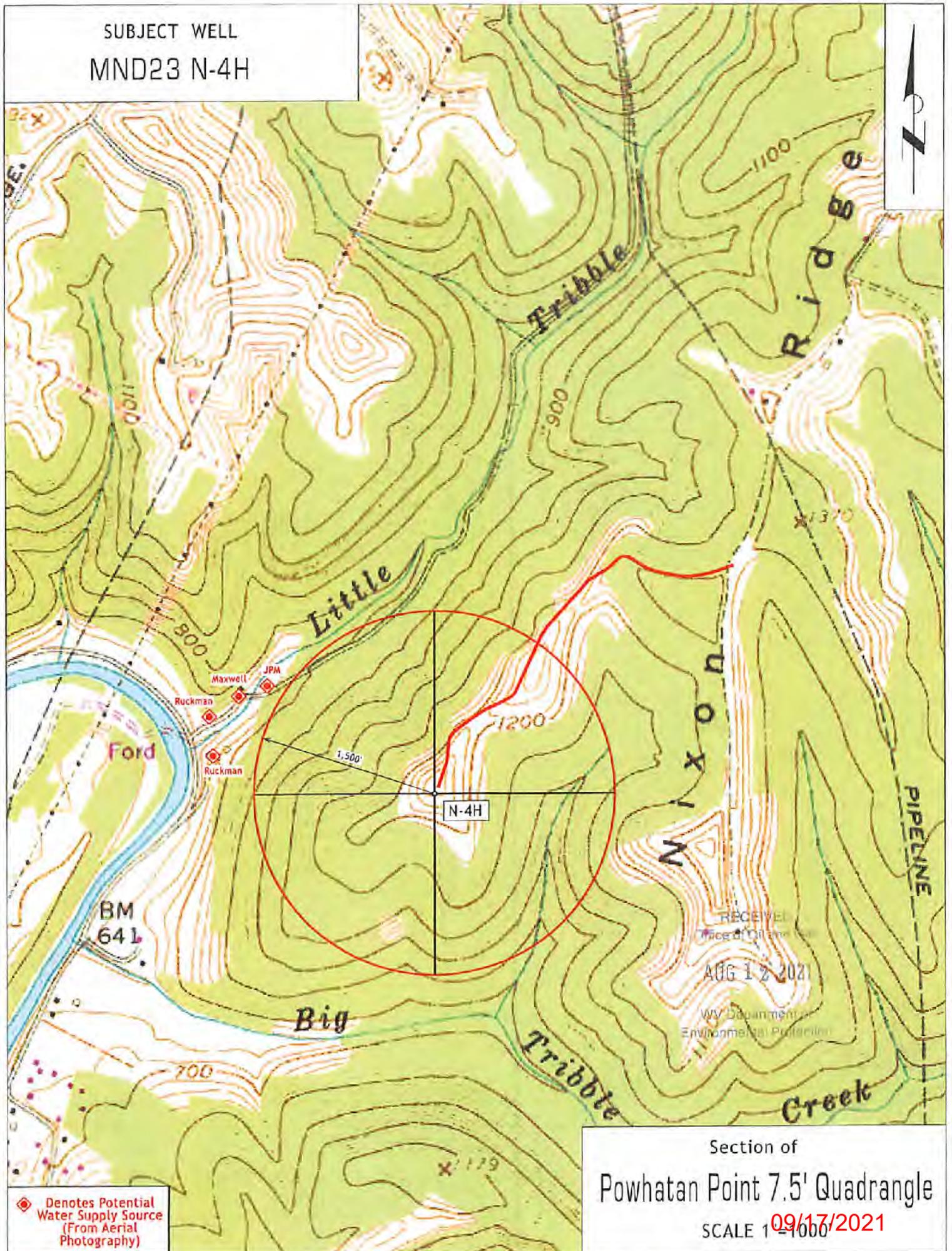
Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_,

Cassidy Boardman Notary Public

My Commission Expires 7/31/2022

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09/17/2021

SUBJECT WELL  
MND23 N-4H



Denotes Potential Water Supply Source (From Aerial Photography)

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

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

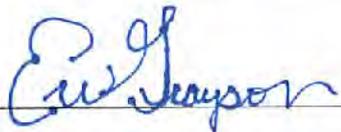
Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *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>520040.8</u>
County:	<u>Marshall</u>		Northing:	<u>4407234.4</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](mailto:depprivacyofficer@wv.gov).

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(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 RETURN RECEIPT REQUESTED
- HAND DELIVERY

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

Notice is hereby provided to the SURFACE OWNER(s) \* 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: HG Energy II Appalachia, LLC	Name: _____
Address: 5260 Dupont Road Parkersburg, WV 26101	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: West Virginia	UTM NAD 83 Easting: 520037.3
County: Marshall	Northing: 4407221.2
District: Franklin	Public Road Access: Nixon Ridge Road (SLS 21/1)
Quadrangle: Powhatan Point	Generally used farm name: CONSOL
Watershed: Little Tribble Creek	

This Notice Shall Include:

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

RECEIVED  
Office of Oil and Gas

Well Operator: HG Energy II Appalachia, LLC	Address: 5260 Dupont Road	AUG 12 2021
Telephone: 304-420-1119	Parkersburg, WV 26101	
Email: dwhite@hgenergyllc.com	Facsimile: 304-863-3172	

WV Department of  
Environmental Protection

Oil and Gas Privacy Notice:

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

09/17/2021



4705102410

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 57<sup>th</sup> Street, SE  
Charleston, WV 25304

Subject: DOH Permit for the MND-23 Pad, Marshall County  
MND-23 N-4H 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

RECEIVED  
Office of Oil and Gas

AUG 12 2021

WV Department of  
Environmental Protection

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

**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	

RECEIVED  
Office of Oil and Gas

AUG 12 2021

WV Department of  
Environmental Protection

09/17/2021

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

**APPROVED**  
**WVDEP OOG**  
6/3/2019

MOUNDSVILLE  
MARSHALL COUNTY  
WEST VIRGINIA

RECEIVED  
Office of Oil and Gas

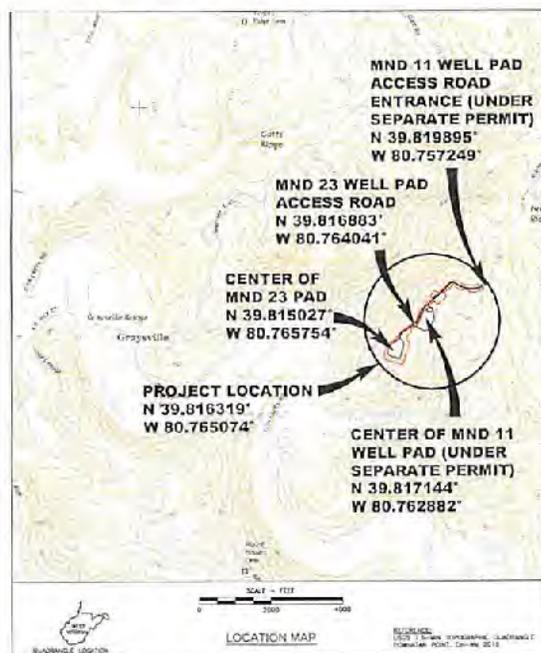
AUG 12 2021

WV Department of  
Environmental Protection

Estimated Gross Material Balance (GM)			
Final Development - Gravel Option			
	Cur	Fill	Stockpile
MND 23 Pad	65,490	66,170	950
Access Road	100	590	190
Total	65,590	66,760	1,140
Total Site Balance			490 Cur
Stockpiled Topsoil (3' max of Earthwork)			
Est. Soil Factor	(20%)		1,210
Est. Topsoil Stockpile Volume (Loose CY)			7,430
Est. Topsoil To Be Resourced on Diff. E. Types			1,850
Minimum Total Stockpile Capacity Required (CY)			6,580
Notes:			
1. Material balance for soil, grass, and rock quantities only.			
2. Topsoil est. volume based on 6 inches average depth.			
3. Material balance and aggregate quantities based on estimates and may not be representative of actual quantities.			
4. Estimates do not reflect contractor pay volumes.			
Estimated Gravel Quantities			
	MND 23 Pad	MND 11 Access Road	TOTAL
1/4" & 3/8" Screen (Bladed Gr)	19,530	1,590	21,120
3/4" Coarse Run (Bladed)	2,190	-	2,190
1 1/2" Gravel (Bladed)	-	1,682	1,682
Estimated 12" Composite Filter Sock Length (LF) (Bladed)			1,165
Estimated 12" Composite Filter Sock Length (LF) (Bladed)			1,852
Estimated Total 12" Composite Filter Sock Length (LF)			3,017
Estimated Total Limit of Disturbance (Acres)			
Pad Peak Pre-Construction Elevation (Ft)			1278
Well Pad Sub-base Elevation (Top of Soil Cement) (Ft)			1230.30
Well Pad Surface Elevation (Ft)			1287.02

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



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-4D	ACCESS ROAD SECTIONS
5A-5F	CONSTRUCTION NOTES & DETAILS
6A-6C	RESTORATION PLAN
7	PROPERTY MAP

WELL #	LAT.	LONG.
1	N 39.814735	W 80.755892
2	N 39.814774	W 80.755875
3	N 39.814814	W 80.755865
4	N 39.814854	W 80.755851
5	N 39.814894	W 80.755836
6	N 39.814934	W 80.755824

WB1-NF WELL COORDINATES  
WELL ELEVATIONS = 1237.45

*B.S. 8-2-21*

	LATITUDE	LONGITUDE
MND 23 WELL PAD ACCESS ROAD ENTRANCE	N 39.810083	W 80.764041
MND 11 WELL PAD ACCESS ROAD ENTRANCE	N 39.819895	W 80.757249

RECORD OWNER	RECORD LOT #	RECORD AREA (SQ. FT)	AREA WITHIN LOD
HG ENERGY PROPERTY	TM 4 PARCEL 14	121,531 AC.	15,379 AC.
NIXON RIDGE LN ROW	N/A	N/A	0.025 AC.
TOTAL LIMIT OF DISTURBANCE			19,004 AC.

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REVISION	DATE	DESCRIPTION
1	01/24/2019	REVISED WELL PAD DIMENSIONS
2	02/01/2019	REVISED WELL PAD DIMENSIONS
3	02/06/2019	REVISED ERIAR DETAIL
4	04/29/2019	REVISED TO INCLUDE ACCESS TO PUBLIC ROAD
5	09/17/2019	REVISED PER MARSHALL COUNTY COMMENTS
6	02/26/2021	REVISED PER WVDP COMMENTS



TITLE SHEET  
HG MND 23  
MARSHALL COUNTY  
WEST VIRGINIA

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

APPROVED	DATE	PROJECT NO.	DRAWING NUMBER
SEP 01/16/2019	SEP 01/02/2019	1000-1902/837	0407837-01
DRAWN	MFR	12/20/2019	SHEET 1



S:\PROJECT FILES\1000-1902\837 HG MND 23\DRAWINGS\1902\837 MND 23 TITLE SHEET.DWG, 29/09/2019 11:53 AM

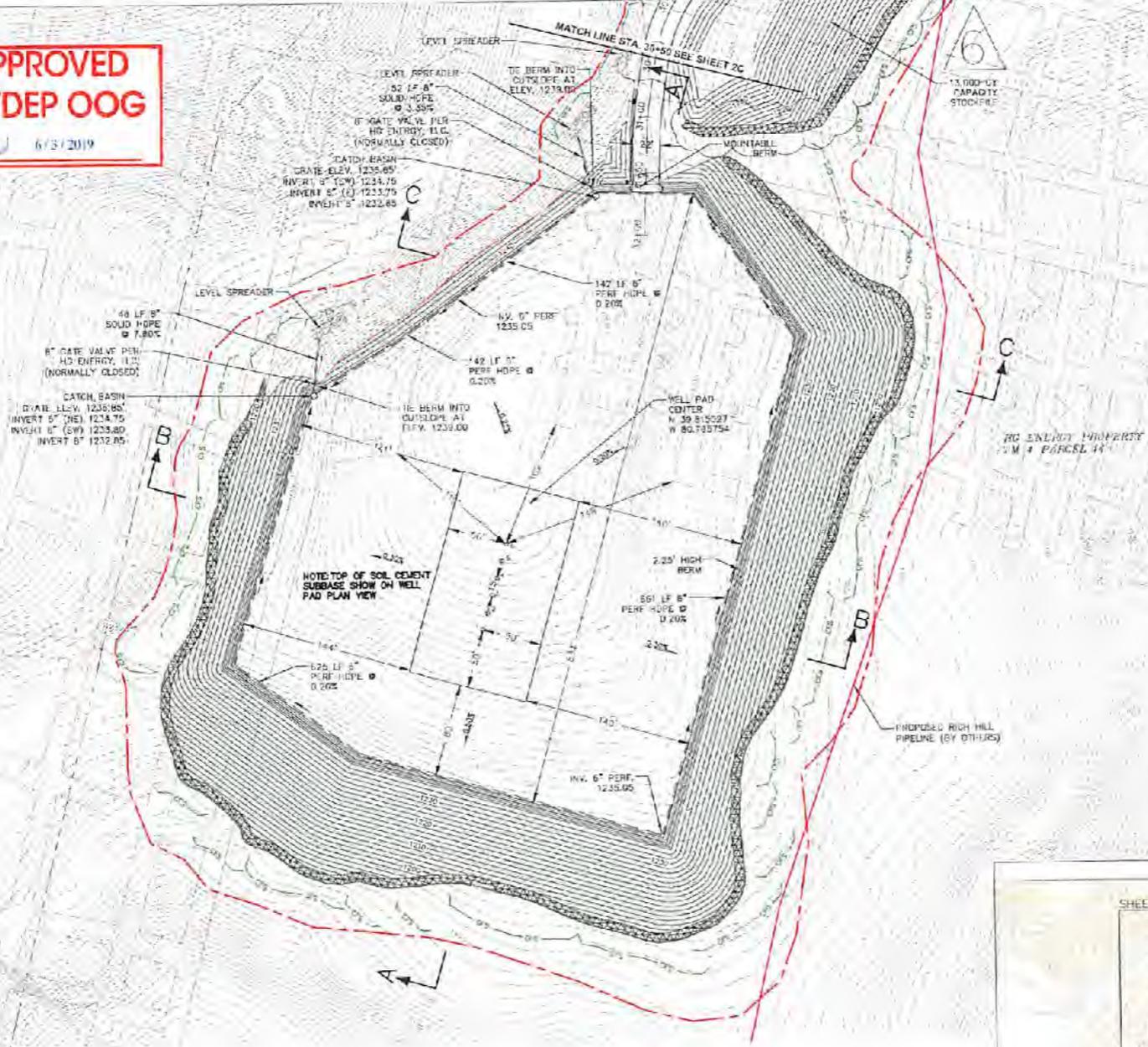
WEST VIRGINIA

CALL BEFORE  
YOU DIG!

Dial 811 or  
800.245.4848  
Miss 800 of West Virginia

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.

**APPROVED WVDEP OOG**  
6/3/2019



Estimated Gross Volume (CY):  
Final Development - (5) Well Pad

Item	Qty	Unit	Volume
WELL PAD	5	Sq. Ft.	300
Access Road	150	Sq. Ft.	400
Total	300	Sq. Ft.	700
Total Soil Volume			400.0

Strength of Soil (lb/ft<sup>2</sup>)  
Est. Soil Factor: 1.25  
Est. Total Soil Volume (cu yd): 1.400  
Est. Total Soil to be Removed on Gravel Slopes: 1.800  
Minimum Total Capacity Required (CY): 4.000

Notes:  
1. Material quantities are based on proposed quantities only.  
2. Typical soil volume based on 6 inches average depth.  
3. Material quantities are approximate quantities based on estimates and may not be representative of actual quantities.  
4. All quantities are subject to change.

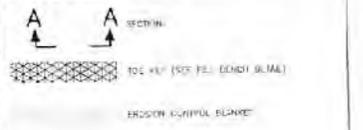
Estimated Gravel Quantities	WELL PAD	ACCESS ROAD	TOTAL
1.5" to 2.0" Gravel	9,633	1,681	11,314
2.0" to 2.5" Gravel	2,160		2,160
2.5" to 3.0" Gravel		1,681	1,681
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Estimated Gravel Quantities

WELL #	WELL PAD	ACCESS ROAD	TOTAL
1	9,633	1,681	11,314
2	2,160		2,160
3		1,681	1,681
4			
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WELL ELEVATIONS = 1237.65

- LEGEND
- APPROXIMATE LIMITS OF DISTURBANCE
  - EXISTING INTERMEDIATE CONTOUR
  - PROPOSED INTERMEDIATE CONTOUR
  - PROPOSED SURFACE WIDE CORRIDOR
  - PROPOSED SURFACE WIDE CORRIDOR
  - EXISTING SURFACE WIDE CORRIDOR
  - MURRAY ENERGY PROPOSED WIRELINE (BY OTHERS)
  - APPROXIMATE PROPERTY BOUNDARY



- NOTES
- ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.