



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, October 25, 2021  
WELL WORK PERMIT  
Horizontal 6A / Re-Work

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

Re: Permit approval for MND 1 AHS  
47-051-01810-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin  
Chief

Operator's Well Number: MND 1 AHS  
Farm Name: CNX GAS COMPANY, LLC   
U.S. WELL NUMBER: 47-051-01810-00-00  
Horizontal 6A Re-Work  
Date Issued: 10/25/2021

Promoting a healthy environment.

10/29/2021

## 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. 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.
2. 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.
3. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
4. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
5. 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.
6. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

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

1) Well Operator: HG Energy II Appalachia, L.P. 494519932 Marshall Clay Powhatan Point  
Operator ID County District Quadrangle

2) Operator's Well Number: MND1 AHS Well Pad Name: MND1

3) Farm Name/Surface Owner: Murray Energy Corp Public Road Access: County Highway 88/8

4) Elevation, current ground: 1150' Elevation, proposed post-construction: 1150' (pad constructed)

5) Well Type (a) Gas X Oil \_\_\_\_\_ Underground Storage \_\_\_\_\_

Other \_\_\_\_\_

(b) If Gas Shallow X Deep \_\_\_\_\_

Horizontal X

*SOW  
9/20/2021  
For Barry*

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus 6262' - 6309', 55' Thick, 4204 psi

8) Proposed Total Vertical Depth: 6290'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 8171'

11) Proposed Horizontal Leg Length: 649'

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

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

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14) Approximate Saltwater Depths: None

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15) Approximate Coal Seam Depths: 704' - 709'

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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 \_\_\_\_\_

(a) If Yes, provide Mine Info: Name: Wells are located in abandoned area of McElroy Mine  
Depth: 692' to seam base  
Seam: Pittsburgh #8  
Owner: Consol Mining Company, LLC

18) CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft./CTS)
Conductor	20"	New	J-55	94	40' "Already grouted in"	40' ✓	CTS
Fresh Water	13 3/8"	New	J-55 BTC	54.5	1100'	1100' ✓	40% excess yield = 1.18, CTS
Coal							
Intermediate	9 5/8"	New	J-55 BTC	40	2600'	2600' ✓	40% excess, Yield = 1.2, CTS
Production	5 1/2"	New	P-110 HP	20	8171'	8171' ✓	10% excess, yield = 1.34, CTS
Tubing							
Liners							

*SDCO  
9/20/2021  
For Barry*

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	26"	0.438	2110		Type 1, Class A	CTS
Fresh Water	13 3/8"	17.5"	0.380	2730		Type 1, Class A	40% excess, yield = 1.18, CTS
Coal							
Intermediate	9 5/8"	12 1/4"	0.395	3950		Type 1, Class A	40% excess, yield = 1.2, CTS
Production	5 1/2"	8 1/2"	0.361	14360 ✓	10000 ✓	Type 1, Class A	10% excess, yield = 1.34 CTS
Tubing							
Liners							

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Kind:				
Sizes:				
Depths Set:				

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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 6,290 feet. Drill horizontal leg to estimated 649' lateral length, 8,171' TMD. Hydraulically fracture and stimulate and be capable of producing from the Marcellus Formation. Should we encounter an unanticipated void in the coal, we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface.

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 to exceed 10,000 psi.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 9.0 (already built)

22) Area to be disturbed for well pad only, less access road (acres): 7.6 (already built)

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 Class A Neat 94#sk40% ExcessYield=1.18 / CTS"  
Intermediate Casing - "15.6 ppg Class A 94#sk1% Calcium BWOC - 4% ExcessYield=1.2 / CTS"  
Production Casing - "Class A 14.8 ppg/Yield 1.34D255 - 0.4% BWOB Fluid Loss/D193 - 0.55% BWOB Retarder/D047 - 0.02 gal / sack Anil Foam/D208 - 0.05% BWOB Viscosifier/10% Excess"

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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. RIN w/ casing & fill w/ Fresh Water. Circulate a minimum of 1 hole volume, plus 30 bbls of 8% bentonite Gel/SOB of poly faka, then clear casing w/ Fresh Water prior to pumping cement.  
Intermediate Casing - Circulate & condition @ TD w/ Air. RIN w/ casing & fill w/ Fresh Water. Circulate a minimum of 1 hole volume, plus 30 bbls of 8% bentonite Gel/SOB of poly faka, 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.

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\*Note: Attach additional sheets as needed.

MND1 Well Pad  
Cement Additives

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**Material Name**      **Material Type**      **Material Description**

Premium NE-1      Portland Cement      Premium NE-1 is a portland cement with early compressive strength properties.

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

Bentonite      Extender

Commonly called gel, it is a clay material used as a cement extender and to control excessive free water.

Ingredient name	%	CAS number
bentonite	90 - 100	1302-78-9
Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7

Calcium Chloride      Accelerator

A powdered, flaked or pelletized material used to decrease thickening time and increase the rate of strength development

Ingredient name	%	CAS number
Calcium chloride	90 - 100	10043-52-4

Cello Flake      Lost Circulation

Graded (3/8 to 3/4 inch) cellophane flakes used as a lost circulation material.

Ingredient name	%	CAS number
No hazardous ingredient		

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.

Ingredient name	%	CAS number
Tributyl phosphate	90 - 100	126-73-8

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.

Ingredient name	%	CAS number
Sucrose	90 - 100	57-50-1

EC-1

Ingredient name	%	CAS number
Calcium magnesium oxide	90 - 100	37247-91-9

MPA-170      Gas Migration

Multi-purpose polymer additive used to control free fluid, fluid loss, rheology, and gas migration.

Ingredient name	%	CAS number
No hazardous ingredient		

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.

Ingredient name	%	CAS number
Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7
Calcium oxide	1 - 5	1305-78-8

R-3      Retarder

A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.

Ingredient name	%	CAS number
Organic acid salt	40 - 50	Trade secret

S-5      Surfactant

Used to water wet casing and formation to facilitate cement bonding.

Ingredient name	%	CAS number
2-Butoxyethanol	20 - 30	111-76-2
Proprietary surfactant	10 - 20	Trade secret
D-Glucoopyranose, 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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MND1AHS  
Marcellus Shale Horizontal  
Marshall County, WV

Ground Elevation		1150'	MND1AHS SHL				494217.95N 1642179.94E			
Azm		325°	MND1AHS LP				495763.91N 1644154.38E			
WELLBORE DIAGRAM			MND1AHS BHL				496295.94N 1643781.85E			

WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
	28"	20" 94# J-55	Conductor	0	40	AIR	*Already Grouted in*	N/A	Once at casing setting depth, ensure hole is clean at TD	Conductor casing = 0.438" wall thickness Burst=2110 psi
			*Conductor already set*							
	17.5"	13-3/8" 54.5# J-55 BTC	Fresh Water	538', 801', 898', 947'		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 8% bentonite Gel/50# of poly flake, then clear casing w/ Fresh Water prior to pumping cement.	Surface casing = 0.380" wall thickness Burst=2730 psi
			Surface Casing	0	1100					
			Coal(s)	704'-709'						
	12.25"	9-5/8" 40# J-55 BTC	Big Lime / Big Injun	1742 / 1832	1832 / 1922	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 8% bentonite Gel/50# of poly flake, then clear casing w/ Fresh Water prior to pumping cement.	Intermediate casing = 0.395" wall thickness Burst=9950 psi
			Pocono / Price	1922	2075					
			5th Sand / Weir	2154	2177					
			Intermediate Casing	0	2600					
	8.75" Vertical	5-1/2" 20# P-110 HP CDC HTQ	Spaachley	3389	3302	AIR and/or 8 Cppg SOBM	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 = 0.261" wall thickness Burst=14,360 psi Note: Actual centralizer schedules may be changed due to hole conditions
			Java	4778	4809					
			Pisa Creek	5015	5102					
			Angola	4976	5200					
			Rhainstreet	5719	6002					
			Cashaqua	6002	6075					
Middlesex			6075	6104						
West River			6104	6166						
Berkett			6166	6187						
Tully			6187	6222						
8.5" Lateral	5-1/2" 20# P-110 HP CDC HTQ	Hamilton	6222	6262	11.5ppg- 12.5ppg SOBM	Run 1 spiral centralizer every 3 joints from the 1st 5.5' long joint to the top of the curve.				
		Marcellus	6262	6309						
		TMD / TVD	6171	6290						
			Onondaga	6309						

LP @ 6290' TVD / 7522' MD      8.5" Hole - Cemented Long String 5-1/2" 20# P-110 HP CDC HTQ      +/-649' ft Lateral      TD @ +/-6280' TVD +/-8171' MD      X-centralizers

WW-9  
(4/16)

API Number 47 - 051 - 01810  
Operator's Well No. MND1 AHS

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 494519932

Watershed (HUC 10) Short Creek - Ohio River (HUC 10) Quadrangle Powhatan Point

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: \_\_\_\_\_

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 - AWKCL, AWSOBM Horizontal - SOBM

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

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

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

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

-Landfill or offsite name/permit number? See Attached

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

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

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

Company Official Signature Diane White

Company Official (Typed Name) Diane White

Company Official Title Accountant

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Subscribed and sworn before me this 27th day of July, 2021

Notary Public

My commission expires 11/2/2021



## Cuttings Disposal/Site Water

### Cuttings-Haul off Company:

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

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

Environmental Coordination Services & Recycling (ECS&R)  
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  
740-548-4889

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

Sycamore Landfill Inc. Permit #R90-079001 05-2010  
4301 Sycamore Ridge Road  
Hurricane, WV 25526  
304-562-2511

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

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

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

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

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

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

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

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Wetzel County Landfill Permit # SWF-1021-97 / WV 0109185  
Rt 1, Box 156A  
New Martinsville, WV 26035  
304-455-3800

Energy Solutions, LLC Permit # UT 2800249  
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 121 North, PO Box 1030  
Kalkaska, MI 49646  
231-258-9961

**Water Haul off Companies:**

Dynamic Structures, Clear Creek DOT # 720488  
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 208997  
Dallas, TX 75320-8997

Nuverra Environmental Solutions  
11942 Veterans Memorial Highway  
Masontown, WV 26542

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

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

**Disposal Locations:**

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

Solidification/Incineration  
Soil Remediation, Inc. Permit # 02-20753  
8055 Arrel-Smith Road  
Lowelville, OH 44436  
330-536-6825

Adams #1 (Buckeye Brine, LLC)  
Permit # 34-031-2-7177  
22988 Airport Road  
Coshooton, OH 43812  
740-575-4484  
312-478-6545

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  
Garrattsville, OH  
713-275-4816

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

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

Adams #3 (Buckeye Brine, LLC)  
Permit # 34-031-2-7241-00-00  
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 Oilfield Services, Inc.  
2999 Hubbard Road  
Youngstown, OH 44505

Dudley #1 UIC (SWIW #1)  
Permit # 34-121-2-2459-00-00  
Select Energy Services, LLC  
7894 S. Pleasants Hwy  
St. Marys, WV 26170  
304-665-2652

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

US Steele 11385  
Permit # 47-001-00561  
200 Evergreen Drive  
Waynesburg, PA 15730  
304-323-6568

Chapin #7 UIC (SWIW #7)  
Permit # 34-083-2-4137-00-00  
Elkhead Gas & Oil Company  
12163 Marne Rd. NE  
Newark, OH 43055  
740-763-3968

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HG Energy II Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 9.0 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	<u>40</u>	Tall Fescue	<u>40</u>
Ladino Clover	<u>5</u>	Ladino Clover	<u>5</u>

**\*\*Maintain E&S Controls through out 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: *Ray Steyer*

Comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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Office of Oil and Gas

SEP 23 2021

WV Department of  
Environmental Protection

Title: Marshall County DEP Inspector

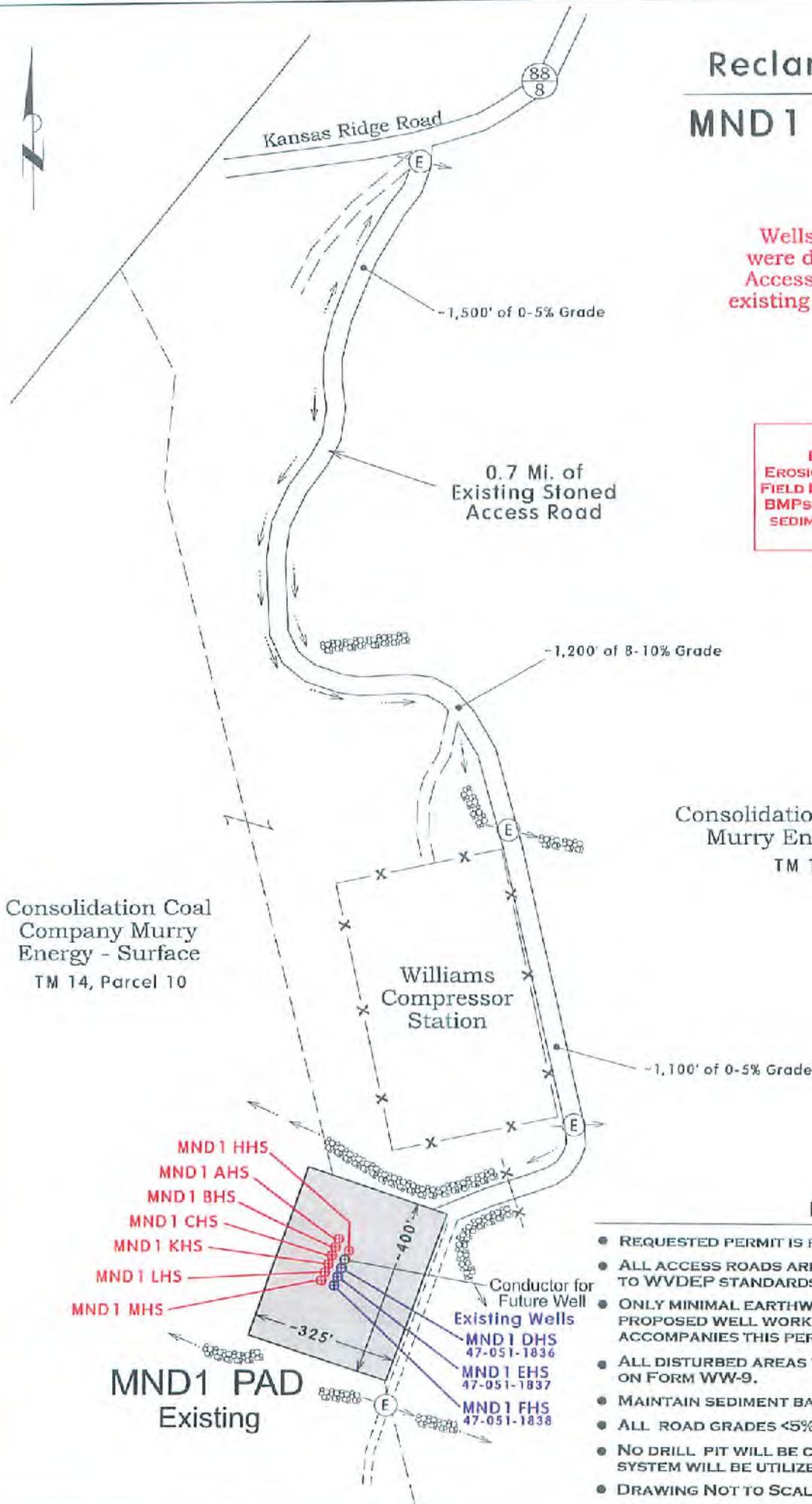
Date: 8-2-21

Field Reviewed? (  ) Yes (  ) No

# Reclamation Plan For: MND1 NORTH PAD

**NOTE**  
Wells DHS, EHS and FHS were drilled in August 2018. Access road and location are existing and will be maintained.

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



Consolidation Coal Company Murry Energy - Surface  
TM 14, Parcel 10

Consolidation Coal Company Murry Energy - Surface  
TM 14, Parcel 9

**MND1 PAD Existing**

**Notes:**

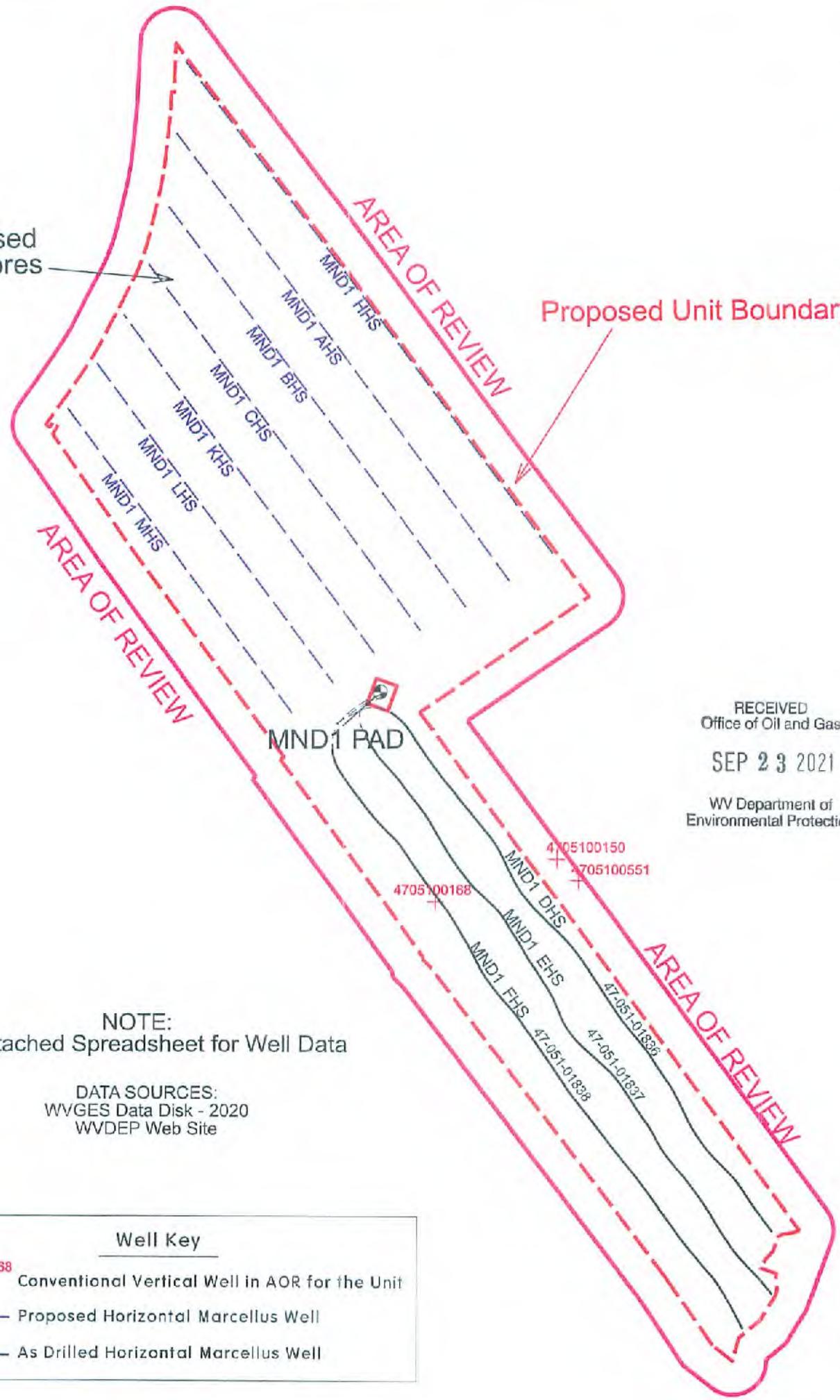
- REQUESTED PERMIT IS FOR DRILLING NEW HORIZONTAL WELL.
- ALL ACCESS ROADS ARE EXISTING AND WILL BE MAINTAINED TO WVDEP STANDARDS.
- ONLY MINIMAL EARTHWORK WILL BE REQUIRED TO COMPLETE PROPOSED WELL WORK. SEE ENGINEERED DRAWING THAT ACCOMPANIES THIS PERMIT PACKAGE FOR ADDITIONAL DETAIL.
- ALL DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
- MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
- ALL ROAD GRADES <5% EXCEPT AS NOTED.
- NO DRILL PIT WILL BE CONSTRUCTED AND A CLOSED LOOP SYSTEM WILL BE UTILIZED TO HANDLE DRILL CUTTINGS.
- DRAWING NOT TO SCALE.

10/29/2021



Proposed Wellbores

Proposed Unit Boundary



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Office of Oil and Gas  
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WV Department of  
Environmental Protection

NOTE:  
See Attached Spreadsheet for Well Data

DATA SOURCES:  
WVGES Data Disk - 2020  
WVDEP Web Site

**Well Key**

4705100168 + Conventional Vertical Well in AOR for the Unit

--- Proposed Horizontal Marcellus Well

— As Drilled Horizontal Marcellus Well

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



Area of Review for:

**MND1 PAD**

MND1 AHS Wellbore	MND1 FHS Wellbore
MND1 BHS Wellbore	MND1 HHS Wellbore
MND1 CHS Wellbore	MND1 KHS Wellbore
MND1 DHS Wellbore	MND1 LHS Wellbore
MND1 EHS Wellbore	MND1 MHS Wellbore

Clay District, Marshall County, W.Va.

10/29/2021

0 2,000  
SCALE: 1" = 2,000'

7/26/2021

EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:

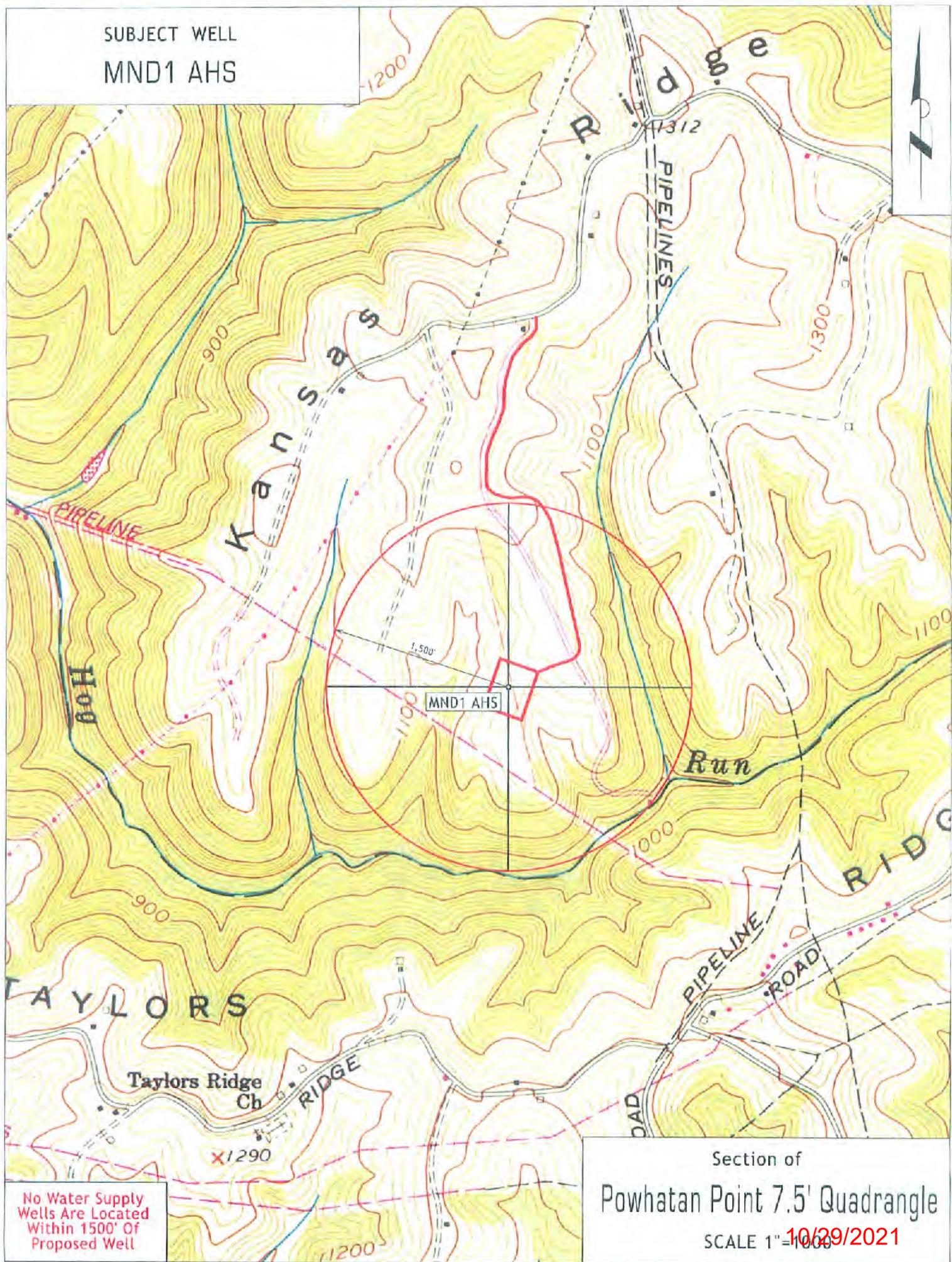
**MND1 NORTH AND PROPOSED WELLS AHS, BHS, CHS, HHS, KHS, LHS & MHS**

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4705100150	Marshall	Guy McDowell 1	Dinsmoore, D. H.	Allegheny Fm	Dry	1,517	P&A	39.845205	-80.764859
2	4705100168	Marshall	D H & Genevieve Mason 2	Tedrow & Moore	Big Injun (Price&eq)	Dry	1,947	ABANDONED	39.843465	-80.771254
3	4705100551	Marshall	Ralph Chaplin 1	Kentucky Central & Co.	UNKNOWN	not available	NA	P&A	39.844335	-80.763730
4	4705101836	Marshall	MND01 DHS	HG Energy, II Appalachia, LLC	Marcellus Shale	Gas	6,175	DRILLING IN PROCESS	39.849872	-80.774263
5	4705101837	Marshall	MND01 EHS	HG Energy, II Appalachia, LLC	Marcellus Shale	Gas	6,175	DRILLING IN PROCESS	39.849833	-80.774281
6	4705101838	Marshall	MND01 FHS	HG Energy, II Appalachia, LLC	Marcellus Shale	Gas	6,175	DRILLING IN PROCESS	39.849794	80.774299

SOURCE: WVGES DATASET (2017) and WVDEP WEBSITE

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WV Department of  
Environmental Protection

SUBJECT WELL  
MND1 AHS



No Water Supply  
Wells Are Located  
Within 1500' Of  
Proposed Well

Section of  
Powhatan Point 7.5' Quadrangle  
SCALE 1"=1000' 10/29/2021

**HG Energy II Appalachia, LLC**

**Site Safety Plan**

**MND 1 Well Pad  
1100 Kansas Ridge Rd  
Moundsville, Marshall County, WV**

**July 2021: Version 1**

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

HG Energy II Appalachia, LLC.

5260 Dupont Road

Parkersburg, WV 26101

RECEIVED  
Office of Oil and Gas

SEP 23 2021

WV Department of  
Environmental Protection

*Bay Stely* 8-2-21 10/29/2021

6,870' to Top Hole

39° 52' 30"  
5298' to Bottom Hole

WELL: MND1 AHS Coordinates

WV SPC North (NAD 27)

SURFACE LOCATION  
N - 494,217.9  
E - 1,642,179.9

LANDING POINT  
N - 495,783.9  
E - 1,644,154.4

BOTTOM HOLE  
N - 496,295.9  
E - 1,643,781.9

UTM NAD 83 (mlr)

SURFACE LOCATION  
N - 4,411,134.3  
E - 519,309.0

BOTTOM HOLE  
N - 4,411,775.5  
E - 519,788.5

LAT/LONG (NAD 83)

SURFACE LOCATION  
39.850009°  
80.774266°

BOTTOM HOLE  
39.855775°  
80.768865°

Powhatan Point, OH

Captina Island (USA)

NOTES ON SURVEY

- No water supply wells or developed springs are located within 1,500' of proposed well
- No occupied dwellings or buildings 2500 sq. ft. or larger are located within 625' of proposed well
- Latitude/Longitude offset measurements are referenced to NAD 1927. Well tie lines are referenced to UTM Zone 17 North (NAD 83).
- The location of boundary lines shown herein are based on deed descriptions and boundary data supplied by PVE as shown on the original plats submitted with permit applications in 2015 and 2018. This plat is not intended to represent a boundary survey as defined in §23-5-2 of the W.Va. Legislative Rules.
- Lease Boudaries shown herein are located as described in the provided Certified Title Opinions.

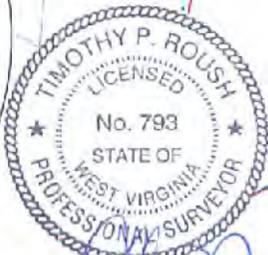
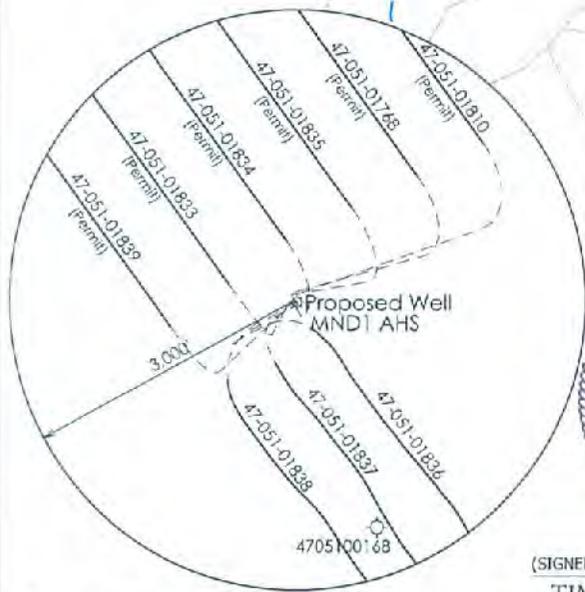
LEGEND

- 100 Surface Parcel No.
- 2 Lease Reference No.
- Lease Boundary
- Surface Boundary
- Proposed Horizontal Lateral
- Proposed Curve Section
- Stream

7,029' to Bottom Hole  
80° 45' 00"

9,129' to Top Hole

North



(SIGNED) TIMOTHY P. ROUSH PS 793

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.

⊕ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

FILE NO. \_\_\_\_\_  
 SCALE: 1" = 1,500'  
 MINIMUM DEGREE OF ACCURACY: Sub-Meter  
 PROVEN SOURCE OF ELEVATION: DGPS Survey



WEST VIRGINIA  
 Department of Environmental Protection  
 Office of Oil and Gas  
 601 57th Street  
 Charleston, West Virginia 25301

DATE: September 14, 2021  
 WELL NAME: MND1 AHS  
 API WELL NO.: 47 - 051 - 01810  
 State County Permit

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

LOCATION: ELEVATION 1,150' WATERSHED Hog Run - Ohio River  
 DISTRICT: Clay COUNTY: Marshall QUADRANGLE: Powhatan Point 7.5'  
 SURFACE OWNER: Marshall County Coal Resources, Inc. ACREAGE: 128.32 Ac.

OIL & GAS ROYALTY OWNER: HG Energy II Appalachia, LLC LEASE ACREAGE: 128.32 Ac. LEASE NO. \_\_\_\_\_  
 PROPOSED WORK: DRILL  CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION \_\_\_  
 PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD Plat - Revised BHL and TVD  
 PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_ TARGET FORMATION Marcellus Shale ESTIMATED DEPTH 6,290' TVD  
 8,172' TMD

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

10/29/2021

6,870' to Top Hole

39° 52' 30"  
5298' to Bottom Hole

WELL: MND1 AHS Coordinates

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SURFACE LOCATION  
N - 494,217.9  
E - 1,642,179.9

LANDING POINT  
N - 495,763.9  
E - 1,644,154.4

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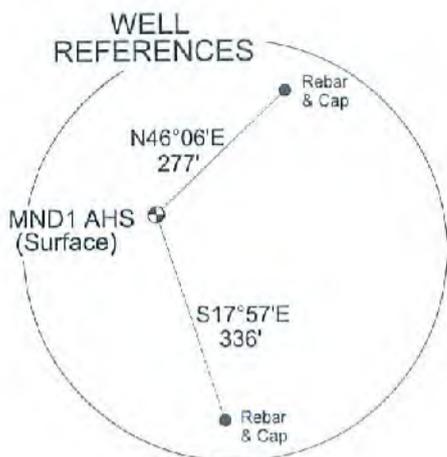
LAT/LONG (NAD 83)

SURFACE LOCATION  
39.850009°  
80.774286°

BOTTOM HOLE  
39.855775°  
80.768685°

LEASE TABLE

①	HG ENERGY II APPALACHIA, LLC	TMP 04-14-10
②	HG ENERGY II APPALACHIA, LLC	TMP 04-14-09
⑬	HG ENERGY II APPALACHIA, LLC	TMP 04-14-08



7,029' to Bottom Hole  
80° 45' 00"  
9,129' to Top Hole

North

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113	Marshall County Coal Resources, Inc.	TMP 04-14-08
124	Eugene C. & Elizabeth A. Estep	TMP 04-13-02



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Department of Environmental Protection  
Office of Oil and Gas  
601 57th Street  
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API WELL NO. 47-051-01810  
State County Permit

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Parkersburg, WV 26101

DESIGNATED AGENT: Diane White  
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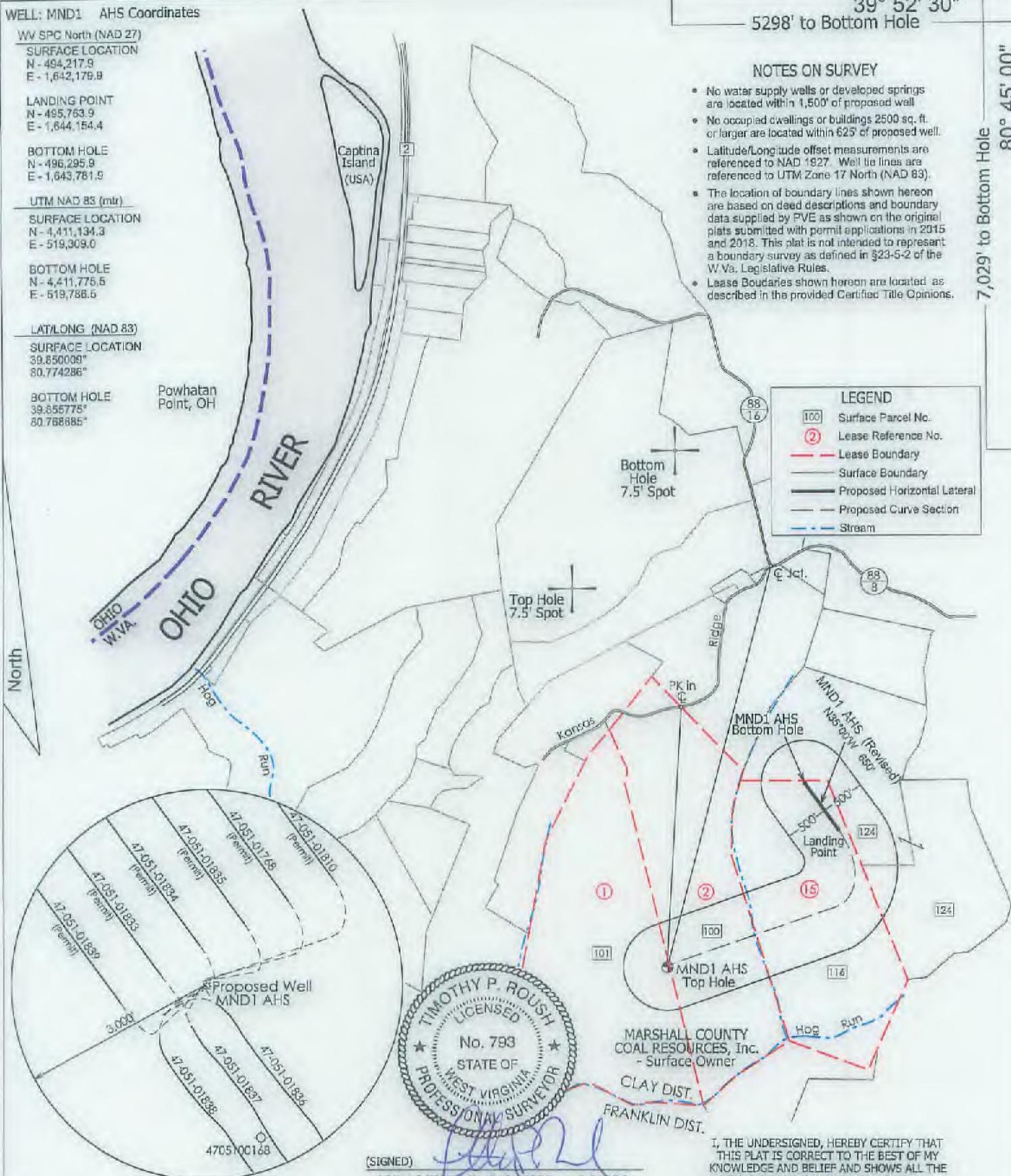
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North



(SIGNED) *[Signature]*  
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 Office of Oil and Gas  
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10/29/2021

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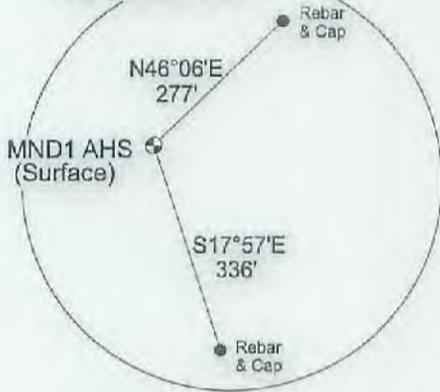
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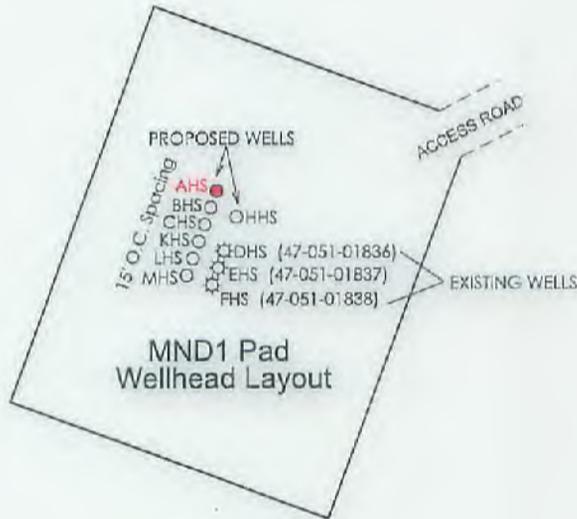
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+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.



WEST VIRGINIA  
Department of Environmental Protection  
Office of Oil and Gas  
601 57th Street  
Charleston, West Virginia 25301

DATE September 14, 2021  
WELL NAME MND1 AHS  
API WELL NO. 47 - 051 - 01810  
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FILE NO. \_\_\_\_\_  
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10/29/2021

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WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane White  
ADDRESS: 5260 DuPont Road Parkersburg, WV 26101 ADDRESS: 5260 DuPont Road Parkersburg, WV 26101 PAGE 2 OF 2

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 Chains \*\*

**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

RECEIVED  
Office of Oil and Gas

SEP 23 2021

WV Department of  
Environmental Protection

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

WW-6A1  
(3/13)

Operator's Well No. \_\_\_\_\_

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6A, Section 5(a)(5)  
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WV Department of  
Environmental Protection

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

HG Energy II Appalachia, LLC MND1 AHS Lease Chain

PLAT LEASE NO.	PLAT LEASE NAME	HG Lease Number	MPID	Original Lessor	Original Lessee	Royalty	Book	Page
1	HG Energy II Appalachia, LLC	1) 623175	04-0014-0010-0000-0000	Noble Energy, Inc.	HG ENERGY II APPALACHIA, LLC	Fee	39	1
2	HG Energy II Appalachia, LLC	2) 623177	04-0014-0009-0000-0000	Noble Energy, Inc.	HG ENERGY II APPALACHIA, LLC	Fee	39	1
15	HG Energy II Appalachia, LLC	3) 623173	04-0014-0008-0000-0000	Noble Energy, Inc.	HG ENERGY II APPALACHIA, LLC		39	1

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 WV Department of  
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4105101810



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

---

July 27, 2021

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

RE: Drilling Under Roads – MND1 AHS (47-051-01810)  
Clay 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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10/29/2021

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

Date of Notice Certification: 07/27/2021

API No. 47- 051 - 01810  
Operator's Well No. MND1 AHS  
Well Pad Name: MND1

**Notice has been given:**

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>519309.0</u>
County:	<u>Marshall</u>		Northing:	<u>4411134.3</u>
District:	<u>Clay</u>	Public Road Access:	<u>Country Highway 88/8</u>	
Quadrangle:	<u>Powhatan Point</u>	Generally used farm name:	<u>Consol</u>	
Watershed:	<u>Short Creek - Ohio River (HUC 10)</u>			

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

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following: *PLEASE CHECK ALL THAT APPLY <input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED <input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED <input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or <input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH) <input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION <input checked="" type="checkbox"/> 5. PUBLIC NOTICE <input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION		RECEIVED Office of Oil and Gas  <b>SEP 23 2021</b>  WV Department of Environmental Protection	<b>OOG OFFICE USE ONLY</b> <input type="checkbox"/> RECEIVED/ NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED/ NOT REQUIRED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED <input type="checkbox"/> RECEIVED
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**Required Attachments:**

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

10/29/2021

**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 27th day of July, 2021.

*Mark J Schall* Notary Public

My Commission Expires 11/2/2021

**Oil and Gas Privacy Notice:**

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

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WW-6A  
(9-13)

4705101810  
API NO. 47- -  
OPERATOR WELL NO. MND1 AHS - MND1 MHS  
Well Pad Name: MND1

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: 07/27/2021 Date Permit Application Filed: 09/05/2021

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

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

SURFACE OWNER(s)  
Name: Murray Energy Corporation  
Address: 46226 National Road  
St. Clairsville, Oh 43950

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

SURFACE OWNER(s) (Road and/or Other Disturbance)

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

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

SURFACE OWNER(s) (Impoundments or Pits)

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

COAL OWNER OR LESSEE  
Name: Same as Surface Owner  
Address: \_\_\_\_\_

COAL OPERATOR  
Name: Same as Surface Owner  
Address: \_\_\_\_\_

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)  
Name: No water sources within 1500'  
Address: \_\_\_\_\_

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

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

\*Please attach additional forms if necessary

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10/29/2021

SEP 23 2021

**Notice is hereby given:**

WV Department of  
Environmental Protection

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

**This Notice Shall Include:**

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

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

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

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

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

**Well Location Restrictions**

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

10/29/2021

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(8-13)

48001810  
API NO. 47- -  
OPERATOR WELL NO. MND1 AHS - MND1 MHS  
Well Pad Name: MND1

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

#### Water Well Testing:

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

#### Water Testing Laboratories:

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

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

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

#### Written Comment:

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

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

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

10/29/2021

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

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

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

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Environmental Protection

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(8-13)

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API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. MND1 AHS - MND1 MHS  
Well Pad Name: MND1

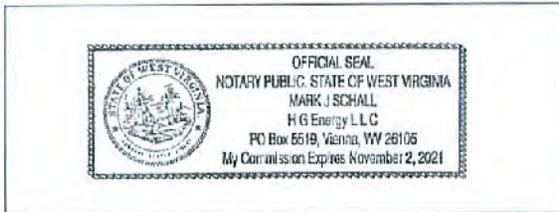
**Notice is hereby given by:**

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

Address: 5260 Dupont Road  
Parkersburg, WV 26101  
Facsimile: 304-963-3172

**Oil and Gas Privacy Notice:**

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



Subscribed and sworn before me this 27th day of July, 2021.

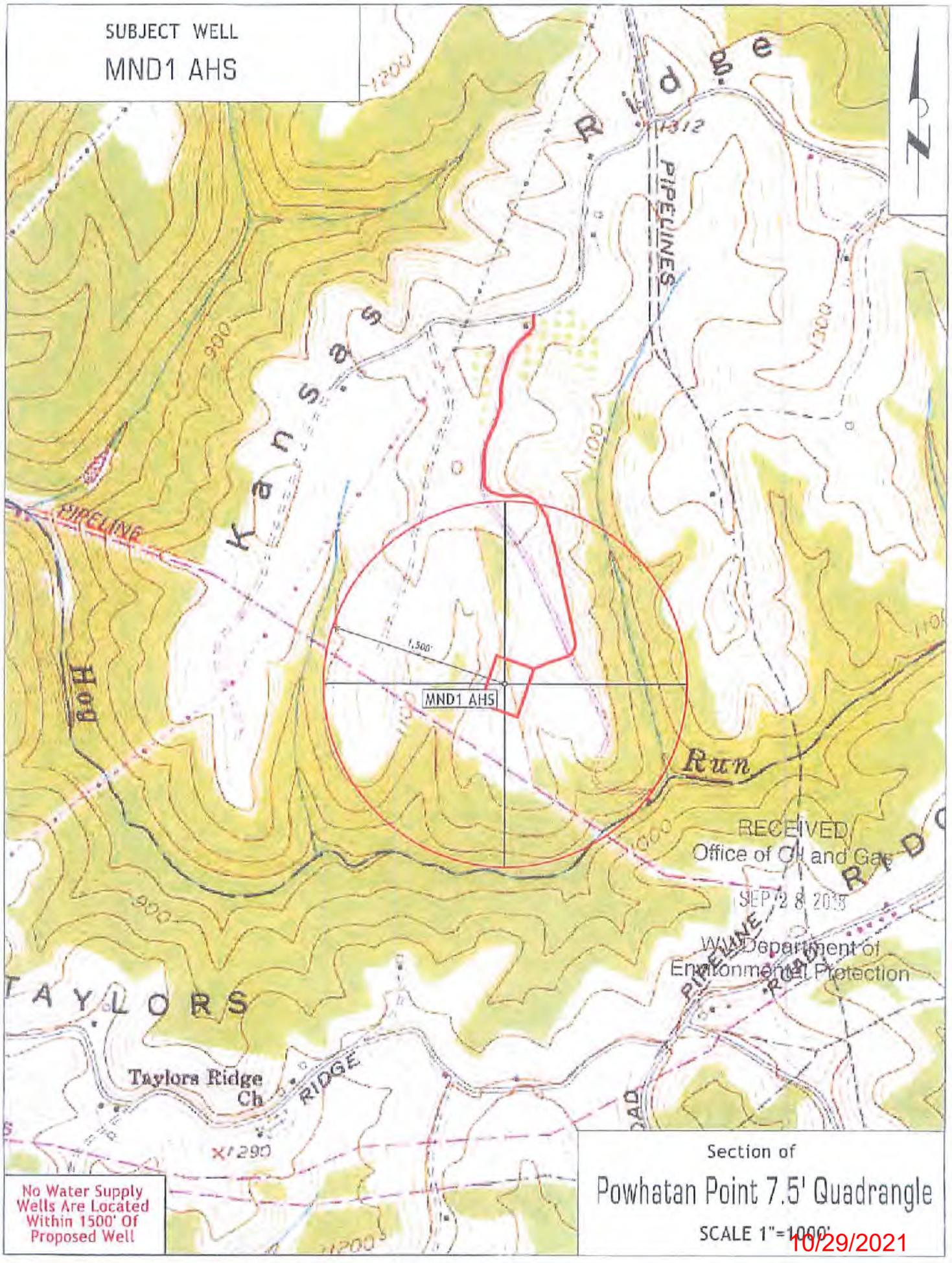
*[Signature]*  
\_\_\_\_\_  
Notary Public

My Commission Expires 11/2/2021

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Environmental Protection

10/29/2021

SUBJECT WELL  
MND1 AHS



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SEP 28 2015

WVA Department of  
Environmental Protection

Section of  
Powhatan Point 7.5' Quadrangle

SCALE 1"=1000'

10/29/2021

No Water Supply  
Wells Are Located  
Within 1500' Of  
Proposed Well



**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:** 07/26/2021      **Date Permit Application Filed:** 08/06/2021

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

CERTIFIED MAIL       HAND  
RETURN RECEIPT REQUESTED      DELIVERY

SEP 23 2021

WV Department of  
Environmental Protection

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

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

Name: Murray Energy Corporation - Jason Witt      Name: \_\_\_\_\_  
Address: 46225 National Road      Address: \_\_\_\_\_  
Saint Clairsville, OH 43950

**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: 519309.0  
County: Marshall      Northing: 4411134.3  
District: Clay      Public Road Access: County Highway 68/6  
Quadrangle: Powhatan Point      Generally used farm name: Consol  
Watershed: Short Creek - Ohio River (HUC 10)

**This Notice Shall Include:**

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

Well Operator: HG Energy II Appalachia, LLC      Address: 5260 Dupont Road  
Telephone: 304-423-1119      Parkersburg, WV 26105  
Email: dwhite@hgenergyllc.com      Facsimile: 304-663-3172

**Oil and Gas Privacy Notice:**

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



4705101810

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 20, 2021

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

RECEIVED  
Office of Oil and Gas

SEP 23 2021

WV Department of  
Environmental Protection

Subject: DOH Permit for the MND1 Pad, Marshall County  
MND1 AHS Well Site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #06-2014-0611 which has been issued to HG Energy, LLC for access to the State Road for a well site located off Marshall County Route 88/8 SLS MP 1.08.

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

Very Truly Yours,

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

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

10/29/2021

**List of Frac Additives by Chemical Name and CAS #**

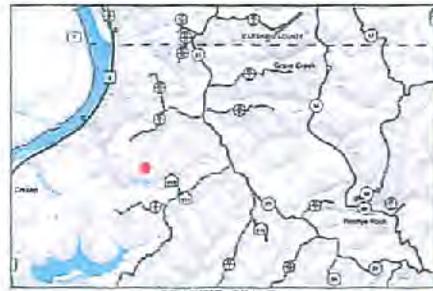
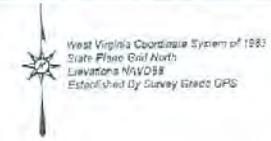
**MND1 Well Pad (AHS,BHS,CHS,DHS,EHS,FHS,HHS,JHS,KHS,LHS,MHS)**

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  
**SEP 23 2021**  
WV Department of  
Environmental Protection

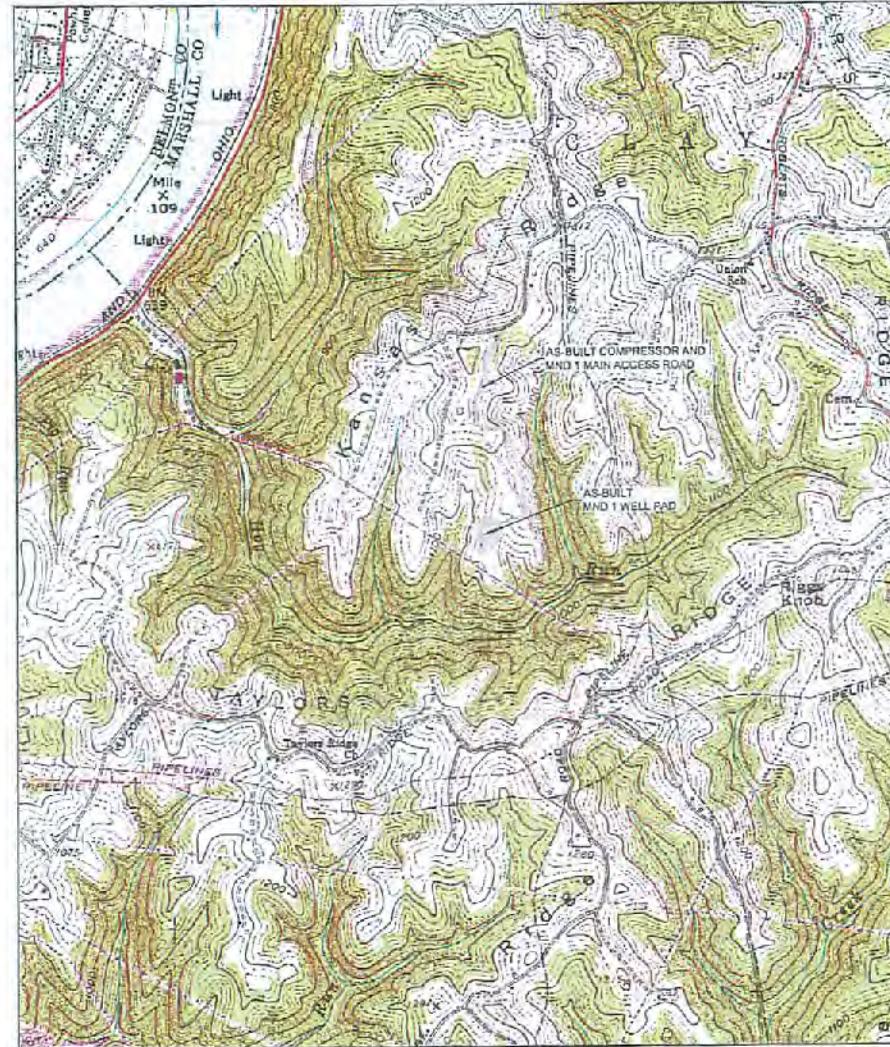
10/29/2021

# MND 1 WELL PAD AS-BUILT AS-BUILT COVER SHEET/LOCATION MAPS



## FLOODPLAIN CONDITIONS

DO SITE CONSTRUCTION ACTIVITIES TAKE PLACE IN FLOODPLAIN:	NO
PERMIT NEEDED FROM COUNTY FLOODPLAIN COORDINATOR:	NO
HECRAS STUDY COMPLETED:	NO
FLOODPLAIN SHOWN ON DRAWINGS:	NO
FIRM MAP NUMBER(S) FOR SITE:	5405100135E
ADJUSTED OF CONSTRUCTION IN FLOODPLAIN:	N/A



PORTWATER POINT & CLEY BASTON QUADS  
SHOWN



MND 1 SITE LOCATIONS	MAP NO.	LATITUDE	LONGITUDE
Center of Well Pad	19-83074	39.849877	-80.714289
Beginning of Compressor Access	19-83074	39.849837	-80.714267
Beginning of MND 1 Access	19-83074	39.849799	-80.714286

## AS-BUILT WELL LEGEND

47-051-01835- LAT: 39.849877 / LONG: -80.714289  
 47-051-01837- LAT: 39.849837 / LONG: -80.714267  
 47-051-01839- LAT: 39.849799 / LONG: -80.714286

## SHEET INDEX

COVER SHEET / LOCATION MAP	1
AS-BUILT SITE PLAN	2-4
ACCESS ROAD PROFILES	5

## As-Built Certification

These drawings have been prepared from survey data provided by the Mountain Herd Mappers and PVE and field checked by Allegheny Surveys, Inc. They reflect the locations and as-built conditions known to exist following construction of this site, to the best of my knowledge.

DATE	REVISIONS	Date: 06/03/2021
		Scale: N.A.
		Designed by: ADM
		File No.: 19-83074
		Sheet: 1 of 5



Allegheny Surveys, Inc.  
 P.O. Box 438  
 237 Birch River Road  
 Birch River, WV 26670  
 304-649-8606



**HORNOR BROTHERS ENGINEERS**  
 1000 West Virginia Ave. SE  
 Lansing, MI 48906, 202-737-2000



AS-BUILT COVER SHEET / LOCATION MAP  
**MND 1 WELL PAD SITE**  
 CLAY DISTRICT  
 MARSHALL COUNTY, WV

B.S. 8-4-21

MISS Utility of West Virginia  
 1-800-245-4848  
 West Virginia State Law  
 (Section XIV, Chapter 24-C)  
 Requires that you call two business  
 days before you dig in the state of  
 West Virginia.  
**IT'S THE LAW!!**





