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west virginia department of environmental protection

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

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

Monday, August 27, 2018  
WELL WORK PERMIT  
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC  
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for MND 20 EU  
47-051-02045-00-00

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

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

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

James A. Martin  
Chief

A blue ink signature of James A. Martin, written in a cursive style.

Operator's Well Number: MND 20 EU  
Farm Name: CONSOLIDATION COAL COM  
U.S. WELL NUMBER: 47-051-02045-00-00  
Horizontal 6A New Drill  
Date Issued: 8/27/2018

# 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.

## 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).



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west virginia department of environmental protection

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Oil and Gas Conservation Commission  
601 57<sup>th</sup> Street SE, Charleston, WV 25304  
304-926-0499 Ext 1274

Barry K. Lay, Chairman  
dep.wv.gov

August 20, 2018

Department of Environmental Protection  
Office of Oil and Gas  
Charleston, WV 25304

RE: Application for Deep Well Permit – API #47-051-02045

COMPANY: HG Energy II Appalachia, LLC

FARM: HG Energy II Appalachia, LLC MND 20 EU

COUNTY: Marshall DISTRICT: Franklin QUAD: Powhatan Point

The deep well review of the application for the above company is **Approved to drill to Point Pleasant for completion.**

The applicant has complied with the provision of Chapter 22C-9, of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

1. Comments to Notice of Deviation filed? No
2. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners? Yes
3. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells: MND 20 DU; 47-051-02014
4. Provided a plat showing that the proposed location is a distance of 400+ feet from the nearest lease line or unit boundary and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

Sincerely,

A handwritten signature in blue ink that reads "Susan Rose".

Susan Rose  
Administrator

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

1) Well Operator: HG Energy II Appalachia, L

<u>494519932</u>	<u>Marshall</u>	<u>Franklin</u>	<u>Powhatan Point</u>
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Operator ID County District Quadrangle

2) Operator's Well Number: MND20 EU Well Pad Name: MND20

3) Farm Name/Surface Owner: Murray Energy Corp Public Road Access: SLS 2/1

4) Elevation, current ground: 1079' Elevation, proposed post-construction: 1058'

5) Well Type (a) Gas  Oil  Underground Storage

Other \_\_\_\_\_

(b) If Gas Shallow  Deep

Horizontal

6) Existing Pad: Yes or No No

*JW 8/24/18*

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Point Pleasant 10662' - 10782' / 120' Thick / 9668 psi

8) Proposed Total Vertical Depth: 10,700'

9) Formation at Total Vertical Depth: Point Pleasant

10) Proposed Total Measured Depth: 28,382'

11) Proposed Horizontal Leg Length: 16,159'

12) Approximate Fresh Water Strata Depths: 445, 708', 805'

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

14) Approximate Saltwater Depths: NA

15) Approximate Coal Seam Depths: 526' - 536'

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

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

(a) If Yes, provide Mine Info: Name: Wells are located in abandoned area of McElroy Mine  
Depth: 526' - 536'  
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	30"	New	LS	157.5#	60'	60'	Drilled In
Fresh Water	20"	New	J-55	94#	950'	950'	CTS
Coal	13 3/8"	New	J-55	54.5#	2300'	2300'	CTS
Intermediate	9 5/8"	New	P-110	47#	9790'	9790'	CTS
Production	5 1/2"	New	P-110	23#	28382'	28382'	20% excess, yield = 1.7669, CTS
Tubing							
Liners							

*JW 8/24/18*

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	30"	0.5"			Class A	CTS
Fresh Water	20"	26"	0.438"	2110 psi		Class A	40% Excess Yield = 1.1924, CTS
Coal	13 3/8"	17.5"	0.380"	2730 psi		Class A	30% Excess Yield = 1.18, CTS
Intermediate	9 5/8"	12.25"	0.472"	9440 psi		Stage 1, Class H, Stage	30% Excess Yield = 1.1744, CTS
Production	5 1/2"	8.5"	0.361"	14520 psi	11,500	Class H	20% Excess Yield = 1.7669, CTS
Tubing							
Liners							

**PACKERS**

Kind:				
Sizes:				
Depths Set:				

*JW 8/24/18*

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

Drill the vertical depth to the Point Pleasant at an estimated total vertical depth of approximately 10,700 feet. Drill horizontal leg - stimulate and produce the Point Pleasant Formation. Should we encounter formation issues, set the 20" into next competent formation but not deeper than elevation. Should we encounter an unanticipated void 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. Maximum pressure not to exceed 10,000 psi.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 17.39

22) Area to be disturbed for well pad only, less access road (acres): 3.8

23) Describe centralizer placement for each casing string:

Conductor - No centralizers used. Fresh Water/Surface - Centralizers every 3 joints to surface. 1st Intermediate - Bow spring on first 2 joints then every third joint to 100' from surface. Intermediate - Bow spring on first 8 joints then every third joint to 100' from surface. Production - Run 1 spiral centralizer every 5 joints from the top of the curve to surface. Run 1 spiral centralizer every 3 joints from the 1st 5.5" long joint to the top of the curve. See Attached Schematic for more detail.

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

Conductor - N/A, Casing to be drilled in w/ Dual Rotary Rig  
Surface/Fresh Water - 15.0 ppg PNE-1, Class A + 2.5% bwoc CaCl<sub>2</sub>, 40% Excess Yield = 1.1924 / CTS  
1st Intermediate - Lead: 15.0 ppg Class A, 2.5% bwoc CaCl<sub>2</sub> 30% Excess, Yield=1.2803 Tail: 15.0 ppg / Class A / 2.5% bwoc CaCl<sub>2</sub> 30% Excess, Yield=1.18 CTS  
2nd Intermediate - Stage 1: 15.2 ppg PNE-1+2.5% bwoc CaCl<sub>2</sub>, 35.0% Class H, 30% Excess, Yield=1.1313 / Stage 2: 14.5 ppg PNE-1+2.5% bwoc CaCl<sub>2</sub>, 50.50 Class A, 30% Excess, Yield=1.1744 CTS  
Production - Lead: 15.0 ppg, 35.0% Class H +0.75 gal/bk FP-13L +0.3%bwoc MPA-250 +0.35% bwoc R3, 20% Excess, Yield=1.1475 Tail: 9.6 ppg, Class H - Acid Soluble +0.75 gal/bk FP-13L + .05% bwoc MPA-250 + 0.2% bwoc R3 + 30% bwoc ASA301, 20% Excess / Yield=1.7689 CTS  
See Attached Casing Schematic for more detail

25) Proposed borehole conditioning procedures:

Conductor - Ensure the hole is clean at TD. Surface/Fresh Water - Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.  
1st Intermediate - Once casing is at setting depth, circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement. 2nd Intermediate - Once casing is at setting depth, circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement. Production - Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.  
See Attached Schematic for more detail.

\*Note: Attach additional sheets as needed.

**HG Energy II Appalachia, LLC**  
**List of Frac Additives by Chemical Name and CAS #**  
**MND20 Well Pad (AU,BU,CU,DU,EU)**

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

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WW-9  
(4/16)

API Number 47 - \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. MND20 EU \_\_\_\_\_

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: 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

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air and freshwater

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

Additives to be used in drilling medium? Water, soap, KCl, barite

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 List

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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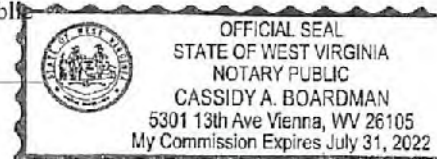
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Environmental Protection

Subscribed and sworn before me this 26th day of January, 2018

Cassidy A Boardman

Notary Public

My commission expires 7/31/2022



HG Energy II Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 17.39 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
Tall Fescue	40
Ladino Clover	5

Seed Type	lbs/acre
Tall Fescue	40
Ladino Clover	5

**\*\* Pre-seed and mulch all cut area, maintain E&S standards during entire operation.**

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: *Jim Teichner*  
Comments: \_\_\_\_\_

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Title: Oil & Gas Inspector Date: 2/5/18

Field Reviewed?  Yes  No

**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  
 Cochranston, PA 16314  
 814-425-7773

**Disposal Locations:**

Apex Environmental, LLC Permit # 06-08438  
 11 County Road 78  
 Amsterdam, OH 43903  
 740-543-4389

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  
 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 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  
 330-882-0164

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  
 Lowellville, 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 15632

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

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

Kemble 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  
8367 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.  
2939 Hubbard Road  
Youngstown, OH 44505

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

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

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

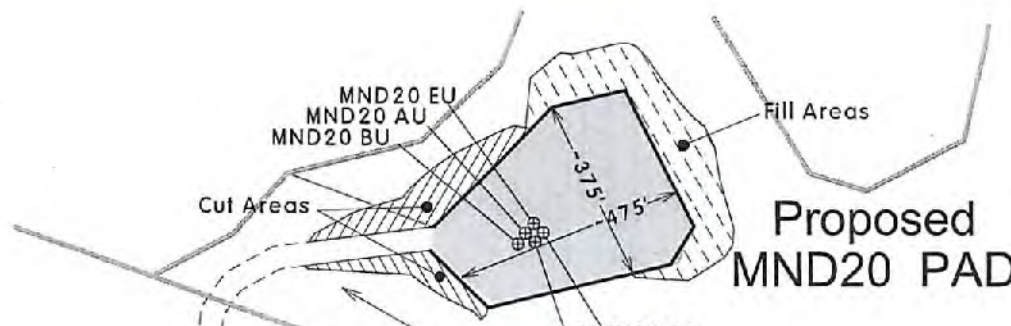
Chapln #7 UIC (SWIW #7)  
Permit # 34-083-2-4137-00-00  
Elkhead Gas & Oil Company  
12168 Marne Rd. NE  
Newark, OH 43055  
740-763-3966

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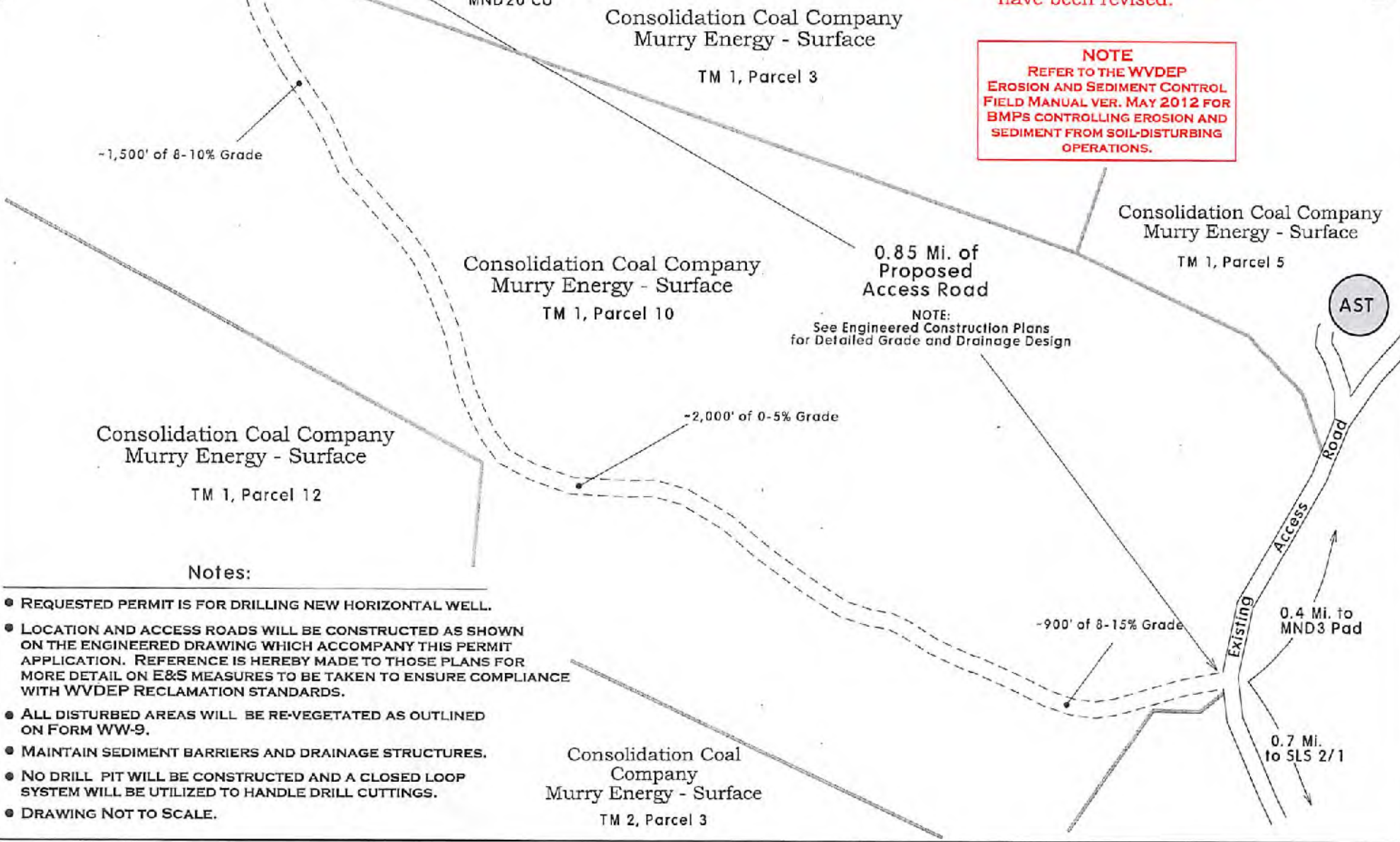


# Reclamation Plan For: MND20 PAD

The wells shown were permitted by Noble Energy in 2015 but were not completed. Surface locations of all wells have been revised.

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



**Notes:**

- REQUESTED PERMIT IS FOR DRILLING NEW HORIZONTAL WELL.
- LOCATION AND ACCESS ROADS WILL BE CONSTRUCTED AS SHOWN ON THE ENGINEERED DRAWING WHICH ACCOMPANY THIS PERMIT APPLICATION. REFERENCE IS HEREBY MADE TO THOSE PLANS FOR MORE DETAIL ON E&S MEASURES TO BE TAKEN TO ENSURE COMPLIANCE WITH WVDEP RECLAMATION STANDARDS.
- ALL DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
- MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
- NO DRILL PIT WILL BE CONSTRUCTED AND A CLOSED LOOP SYSTEM WILL BE UTILIZED TO HANDLE DRILL CUTTINGS.
- DRAWING NOT TO SCALE.

Consolidation Coal  
Company  
Murry Energy - Surface  
TM 2, Parcel 3

# HG Energy II Appalachia, LLC

## Site Safety Plan

MND 20 Well Pad  
2795 Taylors Ridge Rd  
Moundsville, Marshall County, WV

January 2018: Version 1

*Joe*  
2/5/18

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

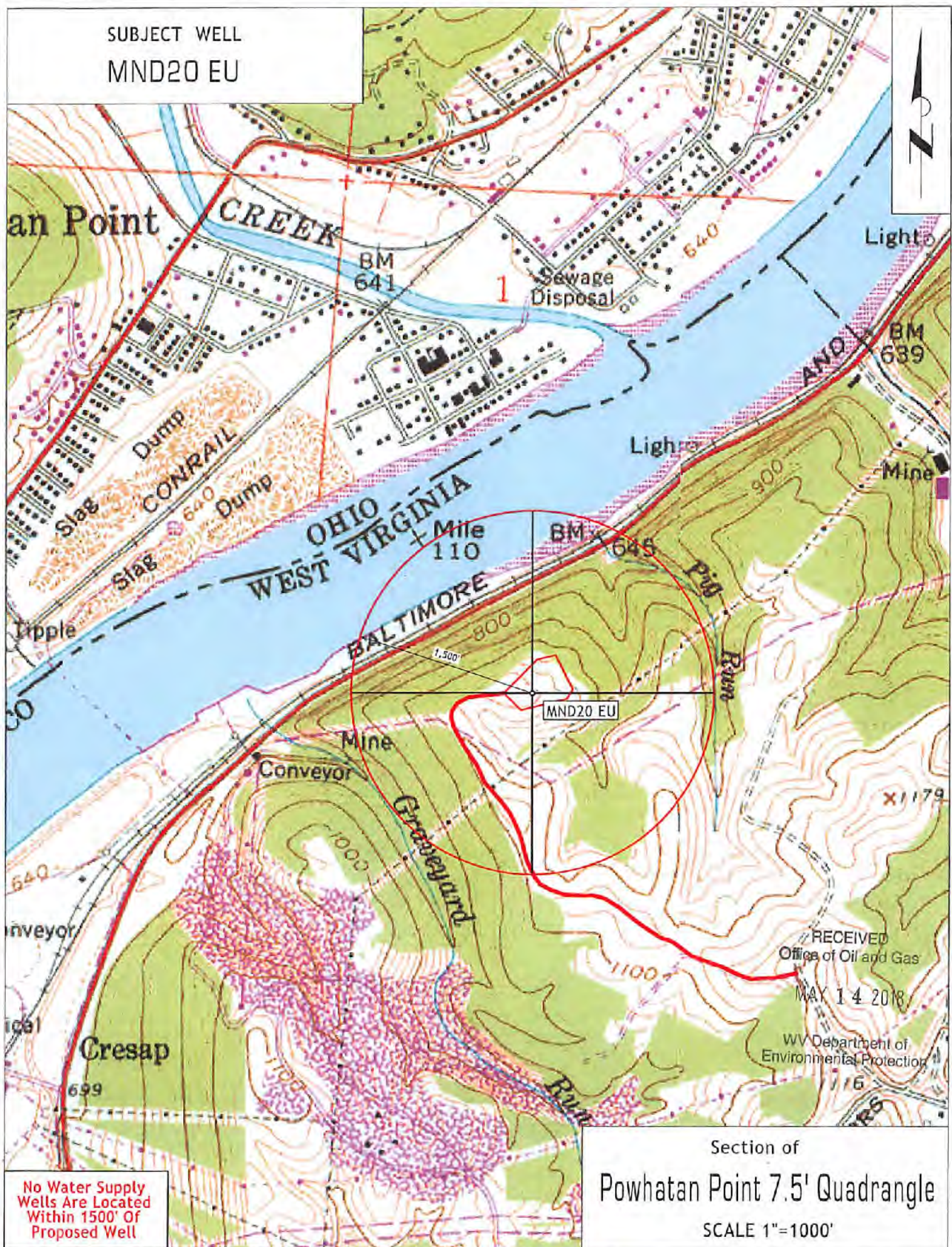
HG Energy II Appalachia, LLC.

5260 Dupont Road

Parkersburg, WV 26101

RECEIVED  
Office of Oil and Gas  
MAY 14 2018  
WV Department of  
Environmental Protection

SUBJECT WELL  
MND20 EU

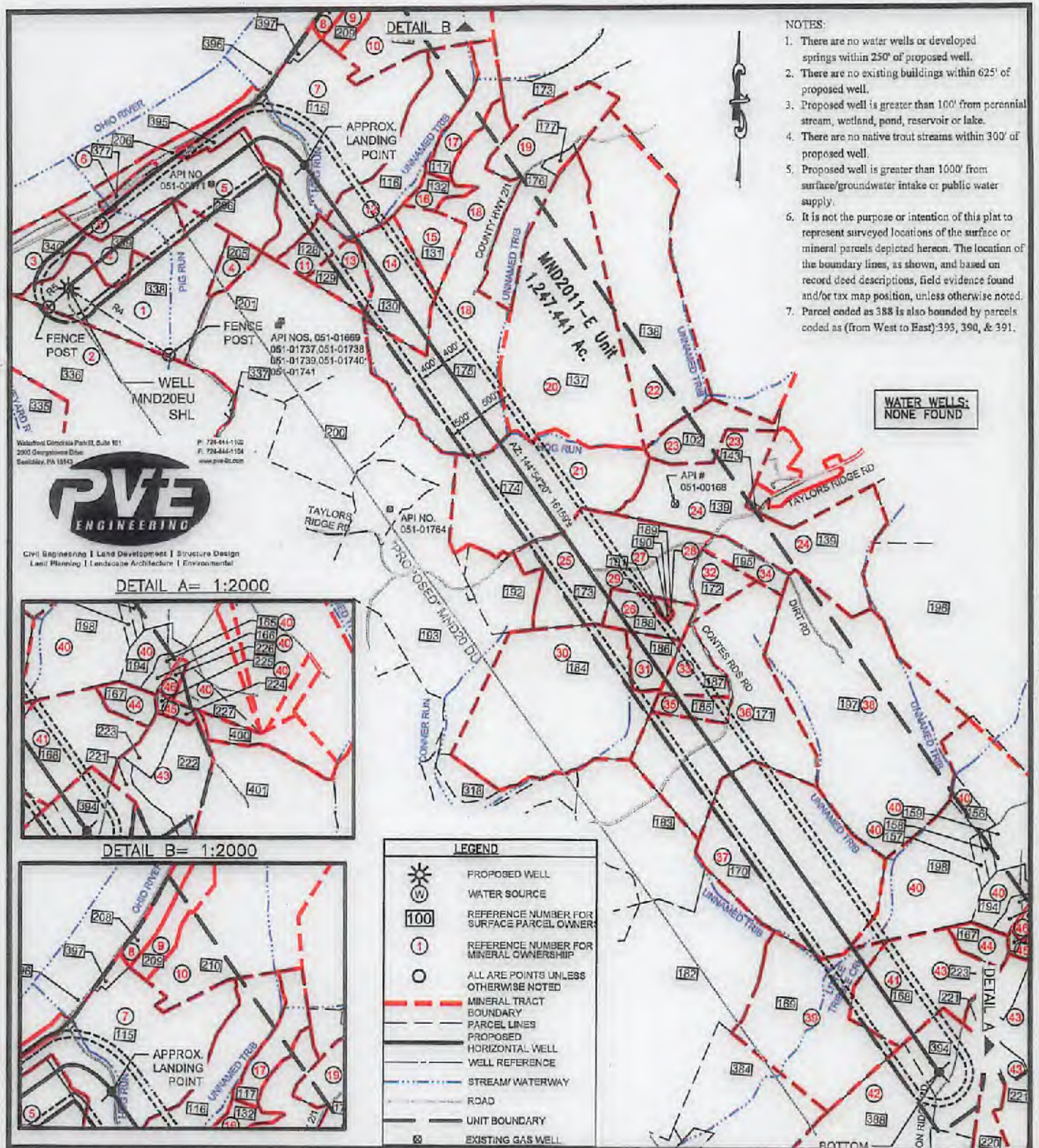


No Water Supply Wells Are Located Within 1500' Of Proposed Well

Section of  
Powhatan Point 7.5' Quadrangle  
SCALE 1"=1000'

RECEIVED  
Office of Oil and Gas  
MAY 14 2018  
WV Department of Environmental Protection



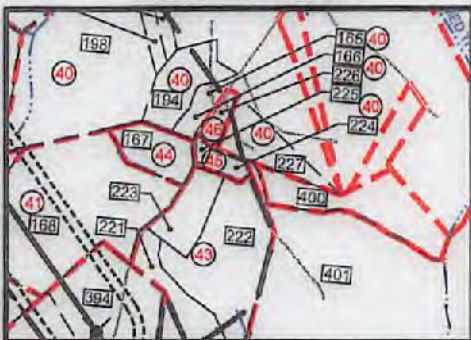


- NOTES:
1. There are no water wells or developed springs within 250' of proposed well.
  2. There are no existing buildings within 625' of proposed well.
  3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
  4. There are no native trout streams within 300' of proposed well.
  5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
  6. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted hereon. The location of the boundary lines, as shown, and based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.
  7. Parcel ended as 388 is also bounded by parcels coded as (from West to East): 393, 390, & 391.

WATER WELLS:  
NONE FOUND

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

DETAIL A= 1:2000



DETAIL B= 1:2000



LEGEND	
	PROPOSED WELL
	WATER SOURCE
	REFERENCE NUMBER FOR SURFACE PARCEL OWNER
	REFERENCE NUMBER FOR MINERAL OWNERSHIP
	ALL ARE POINTS UNLESS OTHERWISE NOTED
	MINERAL TRACT BOUNDARY
	PARCEL LINES
	PROPOSED HORIZONTAL WELL
	WELL REFERENCE
	STREAM/WATERWAY
	ROAD
	UNIT BOUNDARY
	EXISTING GAS WELL

FILE #: MND 20 EU  
DRAWING #: MND 20 EU  
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: *[Signature]*  
R.P.E.: 18766 L.L.S.: P.S. NO.



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



DATE: AUGUST 19, 2015 - REV: JULY 11, 2018  
OPERATOR'S WELL #: MND 20 EU  
API WELL # 47 051 02045H6A  
STATE COUNTY PERMIT

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

WATERSHED: SHORT CREEK-OHIO RIVER  
COUNTY/DISTRICT: MARSHALL / FRANKLIN  
SURFACE OWNER: CONSOLIDATION COAL COMPANY / MURRAY ENERGY  
OIL & GAS ROYALTY OWNER: CNX GAS COMPANY

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

TARGET FORMATION: POINT PLEASANT  
WELL OPERATOR: HG ENERGY II APPALACHIA, LLC  
Address: 5260 DUPONT ROAD  
City PARKERSBURG State WV Zip Code 26101

ELEVATION: 1058'  
QUADRANGLE: POWHATAN POINT, W. VA./OHIO  
ACREAGE: 70.55  
ESTIMATED DEPTH: TVD: 10,700' ± TMD: 28,382±  
DESIGNATED AGENT: DIANE C. WHITE  
Address: 5260 DUPONT ROAD  
City PARKERSBURG State WV Zip Code 26101

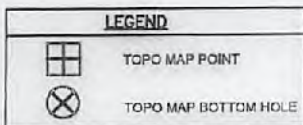
Bottom Hole is located on topo map 4,555 feet south of Latitude: 39° 50' 00"

Well is located on topo map 8,488 feet south of Latitude: 39° 52' 30"

Bottom Hole is located on topo map 2,038 feet west of Longitude: 80° 45' 00"  
 Well is located on topo map 3,250 feet west of Longitude: 80° 47' 30"

**SURFACE HOLE LOCATION (SHL)**

UTM 17 - NAD83  
 N: 4411324.348  
 E: 516847.551  
 NAD27, WV NORTH  
 N: 494976.760  
 E: 1634113.254  
 LAT/LON DATUM-NAD83  
 LAT: 39.851774  
 LON: -80.803054



**APPROX. LANDING POINT**

UTM 17 - NAD83  
 N: 4411888.656  
 E: 517893.210  
 NAD27, WV NORTH  
 N: 496771.137  
 E: 1637575.429  
 LAT/LON DATUM-NAD83  
 LAT: 39.856837  
 LON: -80.790815

**BOTTOM HOLE LOCATION**

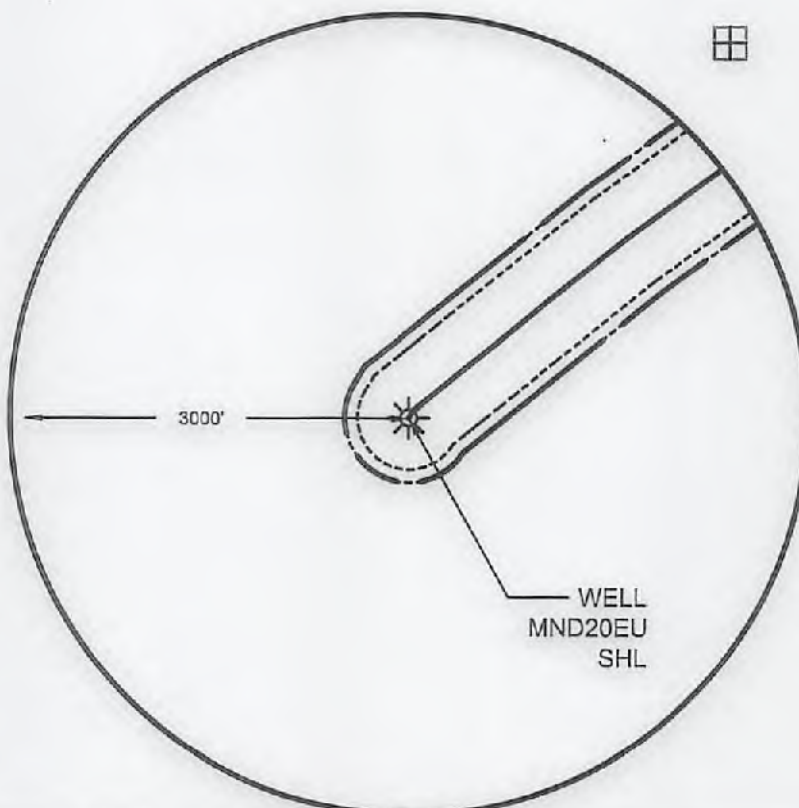
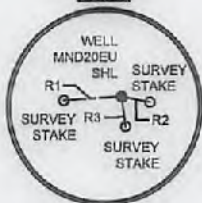
UTM 17 - NAD83  
 N: 4407907.960  
 E: 520790.858  
 NAD27, WV NORTH  
 N: 483549.416  
 E: 1646865.776  
 LAT/LON DATUM-NAD83  
 LAT: 39.820905  
 LON: -80.757086

DETAIL:  
 SCALE: 1"=1,500'

**LINE TABLE**

LINE	BEARING	DISTANCE
R1	N85°59'24"E	301.99'
R2	N78°21'30"W	150.23'
R3	N07°36'13"W	158.51'
R4	N55°25'58"W	1771.24'
R5	N48°54'25"E	405.57'

**REFERENCE DETAIL**



Waterfront Corporate Park II, Suite 101  
 2650 Georgetown Drive  
 Seneca, PA 15703

P: 724-914-1100  
 F: 724-444-1104  
 www.pve.com



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

FILE #: MND 20 EU  
 DRAWING #: MND 20 EU  
 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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 TARGET FORMATION: POINT PLEASANT ESTIMATED DEPTH: TVD: 10,700' ± TMD: 28,382±  
 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

102	RAE MAD CORPORATION	TAX MAP NO. 05-0002-0018-0000-0000	199	ASP GENERATION RESOURCES INC.	TAX MAP NO. 05-0004-0002-0000-0000
116	CONSOLIDATION COAL COMPANY, ET AL.	TAX MAP NO. 04-0014-0002-0000-0000	200	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0007-0000-0000
116	CONSOLIDATION COAL COMPANY	TAX MAP NO. 04-0014-0003-0000-0000	201	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0008-0000-0000
117	EDISON A. BARLOW ET. UX.	TAX MAP NO. 04-0014-0004-0000-0000	206	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0004-0000-0000
124	CONSOLIDATION COAL COMPANY, ET AL.	TAX MAP NO. 05-0001-0006-0000-0000	206	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0001-0000-0000
129	CONSOLIDATION COAL COMPANY, ET AL.	TAX MAP NO. 05-0001-0006-0001-0000	208	STATE ROAD COMMISSION	TAX MAP NO. 04-0007-0015-0000-0000
130	CONSOLIDATION COAL COMPANY, ET AL.	TAX MAP NO. 04-0014-0012-0000-0000	209	WV DEPT. OF HIGHWAYS	TAX MAP NO. 04-0007-0015-0000-0000
131	CONSOLIDATION COAL COMPANY	TAX MAP NO. 04-0014-0013-0000-0000	210	MAIDENS PAUL J. & JULIE D.	TAX MAP NO. 04-0007-0014-0000-0000
132	CONSOLIDATION COAL COMPANY,	TAX MAP NO. 04-0014-0014-0000-0000	220	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0001-0000-0000
137	MURRAY ENERGY Q/O LAND DEPT.	TAX MAP NO. 04-0014-0010-0000-0000	221	STATE ROAD COMMISSION	TAX MAP NO. 04-0007-0015-0000-0000
138	CONSOLIDATION COAL COMPANY	TAX MAP NO. 04-0014-0009-0000-0000	222	WV DEPT. OF HIGHWAYS	TAX MAP NO. 04-0007-0015-0000-0000
139	CHURCH RALPH E. ET. UX.	TAX MAP NO. 05-0002-0015-0000-0000	223	MAIDENS PAUL J. & JULIE D.	TAX MAP NO. 04-0007-0014-0000-0000
143	CHURCH RALPH E. ET. UX.	TAX MAP NO. 05-003A-0001-0000-0000	224	CNX LAND RESOURCES INC.	TAX MAP NO. 05-0004-0011-0002-0000
156	SOUTHERN COUNTRY FARMS INC.	TAX MAP NO. 05-0004-0003-0013-0000	225	CNX LAND RESOURCES INC.	TAX MAP NO. 05-0004-0011-0000-0000
157	DOTTY, JAMES H., & MELANIE A.	TAX MAP NO. 05-0004-0034-0000-0000	226	CNX LAND RESOURCES INC.	TAX MAP NO. 05-0004-0003-0002-0000
158	DOTTY, JAMES H., & MELANIE A.	TAX MAP NO. 05-0004-0034-0001-0000	227	CNX LAND RESOURCES INC.	TAX MAP NO. 05-0004-0003-0004-0000
159	SOUTHERN COUNTRY FARMS INC.	TAX MAP NO. 05-0004-0025-0000-0000	300	CHIO POWER CO.	TAX MAP NO. 05-0008-0003-0000-0000
155	ALLMAN KYLE MICHAEL	TAX MAP NO. 05-0004-0003-0001-0000	318	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0005-0002-0000-0000
156	WEST, WAYNE L JR ET. UX.	TAX MAP NO. 05-0004-0003-0003-0000	326	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0016-0000-0000
157	WAYNE WEST L. JR. ET. UX.	TAX MAP NO. 05-0004-0013-0001-0000	337	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0009-0000-0000
158	CNX LAND RESOURCES	TAX MAP NO. 05-0004-0013-0000-0000	338	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0003-0000-0000
159	ASP GENERATION RESOURCES, INC.	TAX MAP NO. 05-0004-0015-0000-0000	339	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0002-0000-0000
170	ASP GENERATION RESOURCES, INC.	TAX MAP NO. 05-0004-0001-0000-0000	340	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0002-0001-0000
171	ASP GENERATION RESOURCES INC.	TAX MAP NO. 05-0002-0013-0005-0000	377	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0001-0003-0000
172	TEXAS EASTERN TRANSMISSION	TAX MAP NO. 05-0002-0013-0000-0000	384	JPM PROPERTIES LLC.	TAX MAP NO. 05-0004-0016-0000-0000
173	FASOULETOS ANDREW M. ET. AL.	TAX MAP NO. 05-0002-0009-0000-0000	385	HOLSTINE BERNARD W. & ROXANN L.	TAX MAP NO. 05-0004-0014-0000-0000
174	GRAY ROBERT WILLIAM - LIFE	TAX MAP NO. 05-0002-0005-0000-0000	385	HOLSTINE BERNARD W. & ROXANN L.	TAX MAP NO. 05-0004-0014-0002-0000
175	CONSOLIDATION COAL COMPANY, ET AL.	TAX MAP NO. 04-0014-0011-0000-0000	390	LEGG JAMES R. EST.	TAX MAP NO. 05-0009-0003-0000-0000
176	TSCHAPPAT ROBERT E. SR. ET. UX.	TAX MAP NO. 04-0014-0005-0000-0000	391	MCGLINTOCK PATRICIA A.	TAX MAP NO. 05-0009-0008-0000-0000
177	TSCHAPPAT ROBERT E. SR. ET. UX.	TAX MAP NO. 04-0014-0005-0001-0000	394	ANDERSON RHONDA MARIE	TAX MAP NO. 05-0004-0014-0001-0000
182	ASP GENERATION RESOURCES, INC.	TAX MAP NO. 05-0005-0012-0000-0000	395	CONSOLIDATION COAL COMPANY	TAX MAP NO. 05-0001-0001-0002-0000
183	ASP GENERATION RESOURCES, INC.	TAX MAP NO. 05-0005-0011-0000-0000	396	WV STATE ROUTE 2 (OWNERSHIP UNKNOWN)	TAX MAP NO. 04-0014-0001-0000-0000
184	CONSOLIDATION COAL COMPANY, ET AL.	TAX MAP NO. 05-0002-0012-0000-0000	406	STATE ROAD COMMISSION	TAX MAP NO. 05-0004-0008-0002-0000
185	HARTLEY PEGGY S.	TAX MAP NO. 05-0002-0013-0004-0000	406	CNX LAND RESOURCES INC.	TAX MAP NO. 05-0004-0008-0000-0000
186	POTTS JAMES D. ET. UX.	TAX MAP NO. 05-0002-0011-0000-0000	401	CNX LAND RESOURCES INC.	TAX MAP NO. 05-0004-0008-0000-0000
187	POTTS JAMES D. ET. UX.	TAX MAP NO. 05-0002-0013-0002-0000	403	OSTRANDER LINDA S.	TAX MAP NO. 05-0004-0008-0001-0000
188	POTTS JAMES D. ET. UX.	TAX MAP NO. 05-0002-0010-0000-0000			
189	JASENEC RUDY ET. UX.	TAX MAP NO. 05-0002-0010-0002-0000			
190	JASENEC RUDY ET. UX.	TAX MAP NO. 05-0002-0010-0001-0000			
191	JASENEC RUDY ET. UX.	TAX MAP NO. 05-0002-0010-0003-0000			
192	BARNHART THOMAS K. ET. UX.	TAX MAP NO. 05-0002-0008-0000-0000			
193	CONSOLIDATION COAL COMPANY, ET AL.	TAX MAP NO. 05-0002-0005-0000-0000			
194	WEST WAYNE JR. ET. UX.	TAX MAP NO. 05-0004-0044-0000-0000			
195	TEXAS EASTERN TRANSMISSION	TAX MAP NO. 05-0002-0013-0003-0000			
196	HOME RUSSELL BLAINE ET. UX. - LIFE	TAX MAP NO. 05-0003-0031-0000-0000			
197	ASP GENERATION RESOURCES INC.	TAX MAP NO. 05-0004-0002-0000-0000			
198	SOUTHERN COUNTRY FARMS INC.	TAX MAP NO. 05-0004-0003-0000-0000			

Westbank Corridor Park II, Suite 101  
3300 Georgetown Drive  
Sandy, UT 84143

P: 724-444-1000  
F: 724-444-1064  
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Civil Engineering | Land Development | Structure Design  
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LEGEND

- 100 REFERENCE NUMBER FOR SURFACE PARCEL OWNERS
- (1) REFERENCE NUMBER FOR MINERAL OWNERSHIP

FILE #: MND 20 EU

DRAWING #: MND 20 EU

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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ACREAGE: 70.55

OIL & GAS ROYALTY OWNER: CNX GAS COMPANY

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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

HG Plat Number	MPID	Royalty Owner	Surface Ref. Num.
1	05-0001-0003-0000-0000	Belinda Eddy fka Belinda Page Hoover, a married woman dealing in her sole and separate property	338
		Dara Marner and Douglas D. Marner, both individually and as wife and husband	
		Jessica McNabb fka Jessica Faye Hoover, a married woman dealing in her sole and separate property	
		Cheryl Sullivan, a single woman	
		George H. Wells and Nancy Eklund Wells, both individually and as husband and wife	
		William C.M. Wilson and Hiram C. Wilson, as Trustees of The Nancy L. Wilson Revocable Trust	
		Wayland W. Bowser, a married man dealing in his sole and separate property	
		Barbara G. Mathews, by Gay L. Mathews, Her Attorney In Fact	
		HG Energy, LLC	
2	05-0001-0003-0000-0000	Beth Ann Ferris	337
	05-0001-0016-0000-0000	Larry F. Jefferson	336
		Noble Marellus, LP	
		Anacapa Holdings, LLC	
		HG Energy, LLC	
3	05-0001-0002-0000-0000	HG Energy, LLC	339
4	05-0001-0002-0000-0000	HG Energy, LLC	339
	05-0001-0004-0000-0000		205
5	05-0001-0001-0000-0000	HG Energy, LLC	206
6	05-0001-0001-0003-0000	HG Energy, LLC	377
7	05-0001-0001-0002-0000	HG Energy, LLC	395
	04-0014-0001-0000-0000		397
	05-0001-0001-0002-0000		115
8	04-0007-0016-0000-0000	Niya J. Bell, widow	208
9	04-0007-0015-0000-0000	Niya J. Bell, widow	209
10	04-0007-0014-0000-0000	Paul J. Maldens, et ux	210
11	05-0001-0006-0000-0000	Susan Kay Flowers & Robert L. Flowers	128
		Carol Lynn Gill	
		William Gary & Nancy L. Messner	
		George Michael & Pamela S. Messner	
		Ethel Marie Malson	
		Martha Jane Brown	
12	04-0014-0003-0000-0000	HG Energy, LLC	116
13	05-0001-0006-0001-0000	Susan Kay Flowers & Robert L. Flowers	129
		Carol Lynn Gill	
		William Gary & Nancy L. Messner	
		George Michael & Pamela S. Messner	
		Ethel Marie Malson	
		Martha Jane Brown	
14	04-0014-0012-0000-0000	HG Energy, LLC	130
15	04-0014-0013-0000-0000	David C. White	131
16	04-0014-0014-0000-0000	HG Energy, LLC	132
17	04-0014-0004-0000-0000	Estate of Nellie Ramser Dowler, et al	117
		Paul M. Karmel, II, et ux	
		Robin Knowlton, single	
		Sandra Borzkowski, single	
		Joyce Ann Donald, et vir	
		Dick Tracey, et ux	
		William H. Karmel, et ux	
		Jennifer L. Daymich, et vir	
		Tracy Clarke, et vir	
		Lee Patterson, et ux	
18	04-0014-0011-0000-0000, 04-0014-0005-0000-0000	HG Energy, LLC	375
19	04-0014-0006-0000-0000	Robert E. Tschappat SR	176
20	04-0014-0010-0000-0000	HG Energy, LLC	137
21	05-0002-0005-0000-0000	Robert W. Gray, Jr., et al	174
22	01-0014-0009-0000-0000	Consolidation Coal Company	138
23	05-0003A-0001-0000-0000	James R. Chaplin	143
	05-0001-0018-0000-0000		102

24	05-0002-0015-0000-0000	Ralph E. Church and wife, Nancy A. Church, Ralph E. Church II, Patricia Barnhart and Peggy Sue Sebelsky, 1/4's Peggy Sue Hartley	139
25	05-0002-0009-0000-0000	Andrew M. Fasouletos, et ux Michael Andrew Fasouletos Tena Marie Sticklin	173
26	05-0002-0010-0000-0000	James D. Potts and Nancy C. Potts	188
27	05-0002-0010-0002-0000	Jason M. Walters and Helena E. Walters and Theresa M. Gouldsberry	189
28	05-0002-0010-0001-0000	Jason M. Walters and Helena E. Walters and Theresa M. Gouldsberry	190
29	05-0002-0010-0003-0000	Jason M. Walters and Helena E. Walters and Theresa M. Gouldsberry	191
30	05-0002-0012-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	184
31	05-0002-00011-0000-0000	Westbank Bank, Trustee John T. Gallaher EST James D. Potts and Nancy C. Potts Texas Eastern Transmission, LP	186
32	05-0002-0013-0000-0000	Texas Eastern Transmission, LP	172
33	05-0002-0013-0002-0000	Texas Eastern Transmission, LP	187
34	05-0002-00013-0003-0000	Arden Ray Heathertington	195
35	05-0002-0015-0004-0000	Peggy S. Hartley	185
36	05-0002-0013-0005-0000	AEP Generation Resources Inc. and Kentucky Power Company	171
37	05-0004-0001-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	170
38	05-0004-0002-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	197
39	05-0004-0015-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	189
40	05-0004-0003-0000-0000	Southern Country Farms, Inc.	198
	05-0004-0003-0001-0000		165
	05-0004-0003-0003-0000		166
	05-0004-0003-0013-0000		156
	05-0004-0003-0014-0000		227
	05-0004-0004-0000-0000		157
	05-0004-0025-0000-0000		159
	05-0004-0004-0000-0000		134
41	05-0004-0013-0000-0000	MCCLOCK DALE ET UX	168
42	05-0004-0014-0000-0000	MILLER CHARLES W PARSONS PAUL ET UX RUSSELL SHARON LYNN HUFF TIMOTHY ET UX ARNOLD LLOYD C ET UX CROBIN MARY JO KURPIL RICHARD ET UX CLIFTON CLARA MAE EDWARDS GEORGE ET UX KYLE DONNA PAE CONNER JUDITH MAY SCHEIBELHOOD PAUL ET AL SLOUGH ANITA L ET AL	388 354
43	05-0004-0010-0000-0000	James D. Dimitro	221
	05-0004-0011-0001-0000		222
	05-0004-0012-0000-0000		223
44	05-0004-0013-0001-0000	WEST WAYNE LJR ET UX	167
45	05-0004-0011-0000-0000	Michael L. & Sher J. Mason	225
46	05-0004-0003-0002-0000	BLAKE LOYE ALFRED	224
			226

**LEGEND**  
 100 REFERENCE NUMBER FOR SURFACE PARCEL OWNERS  
 1 REFERENCE NUMBER FOR MINERAL OWNERSHIP

FILE #: MND 20 EU  
 DRAWING #: MND 20 EU  
 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: *[Signature]*  
 R.P.E.: 18766 L.L.S.: P.S. NO. \_\_\_\_\_



(+) 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: SHORT CREEK-OHIO RIVER ELEVATION: 1058'  
 COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWHATAN POINT, W. VA./OHIO  
 SURFACE OWNER: CONSOLIDATION COAL COMPANY/ MURRAY ENERGY ACREAGE: 70.55  
 OIL & GAS ROYALTY OWNER: CNX GAS COMPANY ACREAGE: 70.55

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 ESTIMATED DEPTH: TVD: 10,700' ± TMD: 28,382±  
 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: AUGUST 19, 2015 - REV. JULY 11, 2018  
 OPERATOR'S WELL #: MND 20 EU  
 API WELL # 47 051 *D2045 H6A*  
 STATE COUNTY PERMIT

HG Plat Number	MPID	Original Lessor	Original Lessee	Royalty	Book	Page
1)	05-0001-0003-0000-0000	Belinda Eddy fka Belinda Page Hoover	CNX Gas Company, LLC	Not less than 1/8	794	55
		Dara Marner and Douglas D. Marner	CNX Gas Company, LLC	Not less than 1/8	794	43
		Jessica McNabb fka Jessica Faye Hoover	CNX Gas Company, LLC	Not less than 1/8	794	49
		Cheryl Sullivan, a single woman	CNX Gas Company, LLC	Not less than 1/8	794	46
		George H. Wells and Nancy Eklund Wells	CNX Gas Company, LLC	Not less than 1/8	794	58
		William C.M. Wilson and Hiram C. Wilson	CNX Gas Company, LLC	Not less than 1/8	800	626
		Wayland W. Bowser	CNX Gas Company, LLC	Not less than 1/8	794	52
		Barbara G. Mathews, by Gay L. Mathews, Her Attorney in Fact	CNX Gas Company, LLC	Not less than 1/8	831	148
		CNX Gas Company, LLC	Noble Energy, Inc. HG ENERGY II	Fee	752	66
		Noble Energy, Inc.	APPALACHIA, LLC	Fee	39	1
2)	05-0001-0009-0000-0000, 05-0001-0010-0000-0000	Ruth Ann Ferris	CNX Gas Company, LLC	Not less than 1/8	776	535
		Larry F. Jefferson	CNX Gas Company, LLC	Not less than 1/8	776	539
		Noble Marcellus, LP	Anacapa Holdings, LLC	Not less than 1/8	781	267
		Anacapa Holdings, LLC	Noble Energy, Inc.	Not less than 1/8	28	275
		Consolidation Coal Company	CNX Gas Company, LLC	Fee	646	493
		CNX Gas Company, LLC	Noble Energy, Inc. HG ENERGY II	Fee	752	66
		Noble Energy, Inc.	APPALACHIA, LLC	Fee	39	1
3)	05-0001-0002-0000-0000	Noble Energy, Inc.	HG ENERGY II APPALACHIA, LLC	Fee	39	1
4)	05-0001-0004-0000-0000	Noble Energy, Inc.	HG ENERGY II APPALACHIA, LLC	Fee	39	1
5)	05-0001-0001-0000-0000	NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	Fee	39	1
6)	05-0001-0001-0003-0000	NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	Fee	39	1
7)	05-0001-0001-0002-0000, 04-0014-0001-0000-0000, 04-0014-0002-0000-0000	NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	Fee	39	1
8)	04-0007-0016-0000-0000	Niya J. Bell, widow	Noble Energy, Inc. HG ENERGY II	Not less than 1/8	839	568
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
9)	04-0007-0015-0000-0000	Niya J. Bell, widow	Noble Energy, Inc. HG ENERGY II	not less than 1/8	813	251
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
10)	04-0007-0014-0000-0000	Paul J. Maidens, et ux	Noble Energy, Inc. HG ENERGY II	Not less than 1/8	826	90
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
11)	05-0001-0006-0000-0000	Susan Kay Flowers & Robert L. Flowers	Noble Energy, Inc.	Not less than 1/8	796	152
		Carol Lynn Gill	Noble Energy, Inc.	Not less than 1/8	796	150
		William Gary & Nancy L. Messner	Noble Energy, Inc.	Not less than 1/8	796	146
		George Michael & Pamela S. Messner	Noble Energy, Inc.	Not less than 1/8	796	449

		Ethel Marie Malson	Noble Energy, Inc.	Not less than 1/8	797	623
		Martha Jane Brown	Noble Energy, Inc.	Not less than 1/8	796	148
		CNX Gas Company, LLC	Noble Energy, Inc. HG ENERGY II		752	66
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
12)	04-0014-0003-0000-0000	NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	Not less than 1/8	39	1
13)	05-0001-0006-0001-0000	Susan Kay Flowers & Robert L. Flowers	Noble Energy, Inc.	Not less than 1/8	796	152
		Carol Lynn Gill	Noble Energy, Inc.	Not less than 1/8	796	150
		William Gary & Nancy L. Messner	Noble Energy, Inc.	Not less than 1/8	796	146
		George Michael & Pamela S. Messner	Noble Energy, Inc.	Not less than 1/8	796	449
		Ethel Marie Malson	Noble Energy, Inc.	Not less than 1/8	797	623
		Martha Jane Brown	Noble Energy, Inc.	Not less than 1/8	796	148
		CNX Gas Company, LLC	Noble Energy, Inc. HG ENERGY II		752	66
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
14)	04-0014-0012-0000-0000	NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	Fee	909	94
15)	04-0014-0013-0000-0000	David C. White	Noble Energy, Inc. HG ENERGY II	Not less than 1/8	859	307
		Noble Energy, Inc.	APPALACHIA, LLC		39	1
16)	04-0014-0014-0000-0000	NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	Fee	39	1
17)	04-0014-0004-0000-0000	Estate of Nellie Ramser Dowler, et al	Noble Energy, Inc.	Not less than 1/8	895	304
		Paul M. Karnell, II, et ux	Noble Energy, Inc.	1/8	812	235
		Robin Knowlton, single	Noble Energy, Inc.	1/8	813	240
		Sandra Borkowski, single	Noble Energy, Inc.	1/8	797	428
		Joyce Ann Donald, et vir	Noble Energy, Inc.	1/8	797	434
		Dick Tracey, et ux	Noble Energy, Inc.	1/8	797	437
		William H. Karnell, et ux	Noble Energy, Inc.	1/8	806	360
		Jennifer L. Duymich, et vir	Noble Energy, Inc.	1/8	803	606
		Tracy Clarke, et vir	Noble Energy, Inc.	1/8	813	242
		Lee Patterson, et ux	Noble Energy, Inc.	Not less than 1/8	816	164
		All the above leases from NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	Not less than 1/8	39	1
18)	04-0014-0011-0000-0000, 04-0014-0005-0000-0000	NOBLE ENERGY INC	HG ENERGY II APPALACHIA, LLC	Fee	39	1
19)	04-0014-0006-0000-0000	Robert E. Tschappat SR	Chevron U.S.A. Inc.	Not less than 1/8	839	31
		Chevron U.S.A. Inc.	CNX and Noble	Not less than 1/8	33	1
		Chevron U.S.A. Inc.	CNX and Noble	Not less than 1/8	33	316
		CNX Gas Company, LLC	Noble Energy, Inc. HG ENERGY II	Not less than 1/8	37	169
		Noble Energy	APPALACHIA, LLC	Not less than 1/8	39	1
20)	04-0014-0010-0000-0000	Consolidation Coal Company, et al CNX Gas Company, LLC	CNX Gas Company, LLC Noble Energy, Inc. HG ENERGY II	Not less than 1/8	646	493
		Noble Energy, Inc.	APPALACHIA, LLC		752	66
					39	1

21)	05-0002-0006-0000-0000	Robert W. Gray, Jr., et al	Chevron U.S.A. Inc.	Not less than		
		Chevron U.S.A. Inc.	Noble Energy, Inc.	1/8	772	9
		Noble Energy, Inc.	HG ENERGY II		34	502
			APPALACHIA, LLC		39	1
22)	04-0014-0009-0000-0000	Consolidation Coal Company	Noble Energy INC	Fee	752	66
		CNX Gas Company, LLC	Noble Energy INC		909	94
		NOBLE ENERGY INC	HG ENERGY II			
			APPALACHIA, LLC		931	43
23)	05-0003A-0001-0000-0000	James R. Chaplin	Noble Energy, Inc.	Not less than		
			HG ENERGY II	1/8	813	253
	05-0002-0018-0000-0000	NOBLE ENERGY INC	APPALACHIA, LLC		39	1
24)	05-0002-0015-0000-0000	Ralph E. Church and wife, Nancy A. Church, Ralph E. Church II, Patricia Barnhart and Peggy Sue Sebulsky, f/k/a Peggy Sue Hartley	Gastar Exploration, USA Inc.	Not less than		
		Gastar Exploration USA, Inc.	Antinum Marcellus I, LLC	1/8	792	97
		Gastar Exploration Inc. and Antinum Marcellus I, LLC	Noble Energy Inc. and CNX Gas Company, LLC		32	185
		CNX Gas Company, LLC	Noble Energy, Inc.		752	66
		Noble Energy, Inc.	HG ENERGY II		39	1
		NOBLE ENERGY INC	APPALACHIA, LLC		39	1
25)	05-0002-0009-0000-0000	Andrew M. Fasouletos, et ux	Noble Energy, Inc.	Not less than		
		Michael Andrew Fasouletos	Noble Energy, Inc.	1/8	802	283
		Tena Marie Sticklin	Noble Energy, Inc.	Not less than		
			HG ENERGY II	1/8	802	277
		All the above leases from NOBLE ENERGY INC	APPALACHIA, LLC	Not less than		
				1/8	39	1
26)	05-0002-0010-0000-0000	James D. Potts and Nancy C. Potts	Noble Energy Inc.	Not less than		
		NOBLE ENERGY INC	CNX Gas Company, LLC	1/8	845	164
		CNX Gas Company, LLC	Noble Energy INC		31	59
		NOBLE ENERGY INC	HG ENERGY II		37	169
			APPALACHIA, LLC		39	1
27)	05-0002-0010-0002-0000	Jason M. Walters and Helena E. Walters and Theresa M Gouldsberry	Noble Energy	Not less than		
		Noble Energy	CNX Gas Company, LLC	1/8	796	129
		CNX Gas Company, LLC	Noble Energy		36	503
		NOBLE ENERGY INC	HG ENERGY II		37	169
			APPALACHIA, LLC		39	1
28)	05-0002-0010-0001-0000	Jason M. Walters and Helena E. Walters and Theresa M Gouldsberry	Noble Energy	Not less than		
		Noble Energy	CNX Gas Company, LLC	1/8	796	129
		CNX Gas Company, LLC	Noble Energy		36	503
		NOBLE ENERGY INC	HG ENERGY II		37	169
			APPALACHIA, LLC		39	1
29)	05-0002-0010-0003-0000	Jason M. Walters and Helena E. Walters and Theresa M Gouldsberry	Noble Energy	Not less than		
		Noble Energy	CNX Gas Company, LLC	1/8	796	129
		CNX Gas Company, LLC	Noble Energy		36	503
		NOBLE ENERGY INC	HG ENERGY II		37	169
			APPALACHIA, LLC		39	1
30)	05-0002-0012-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc.	Not less than		
		Noble Energy, Inc.	HG ENERGY II	1/8	829	157
			APPALACHIA, LLC		39	1
31)	05-0002-00011-0000-0000	Wesbanco Bank, Trustee John T. Gallaher EST	Noble Energy, Inc.	Not less than		
				1/8	831	58

		James D. Potts and Nancy C. Potts	Noble Energy Inc.	Not less than 1/8	845	164
		NOBLE ENERGY INC	CNX Gas Company, LLC		31	59
		CNX Gas Company, LLC	Noble Energy INC		37	169
		NOBLE ENERGY INC	HG ENERGY II			
			APPALACHIA, LLC		39	1
32)	05-0002-0013-0000-0000	Texas Eastern Transmission, LP	Noble Energy, Inc.	Not less than 1/8	859	510
			HG ENERGY II			
		Noble Energy, Inc.	APPALACHIA, LLC		39	1
33)	05-0002-0013-0002-0000	Texas Eastern Transmission, LP	Noble Energy, Inc.	Not less than 1/8	859	510
			HG ENERGY II			
		Noble Energy, Inc.	APPALACHIA, LLC		39	1
34)	05-0002-00013-0003-0000	Arden Ray Heatherington	Noble Energy INC		797	445
		NOBLE ENERGY INC	CNX Gas Company, LLC		34	167
		CNX Gas Company, LLC	Noble Energy INC		37	169
		NOBLE ENERGY INC	HG ENERGY II			
			APPALACHIA, LLC		39	1
35)	05-0002-0013-0004-0000,	Peggy S. Hartley	CNX Gas Company, LLC		873	547
			and Noble Energy			
		NOBLE ENERGY INC	HG ENERGY II			
			APPALACHIA, LLC		39	1
36)	05-0002-0013-0005-0000	AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc.	Not less than 1/8	829	157
			HG ENERGY II			
		Noble Energy, Inc.	APPALACHIA, LLC		39	1
37)	05-0004-0001-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc.	Not less than 1/8	829	157
			HG ENERGY II			
		Noble Energy, Inc.	APPALACHIA, LLC		39	1
38)	05-0004-0002-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc.	Not less than 1/8	829	157
			HG ENERGY II			
		Noble Energy, Inc.	APPALACHIA, LLC		39	1
39)	05-0004-0015-0000-0000	AEP Generation Resources Inc. and Kentucky Power Company	Noble Energy, Inc.	Not less than 1/8	829	157
			HG ENERGY II			
		Noble Energy, Inc.	APPALACHIA, LLC		39	1
40)	05-0004-0003-0000-0000, 05-0004-0003-0001-0000, 05-0004-0003-0003-0000, 05-0004-0003-0013-0000, 05-0004-0003-0014-0000, 05-0004-0034-0000-0000, 05-0004-0025-0000-0000, 05-0004-0044-0000-0000	Southern Country Farms, Inc.	Noble Energy, Inc.	Not less than 1/8	801	79
			HG ENERGY II			
		Noble Energy, Inc.	APPALACHIA, LLC		39	1
41)	05-0004-0013-0000-0000	MCCLINTOCK DALE ET UX	CHEVRON USA INC	Not less than 1/8	773	615
			HG ENERGY II			
		CHEVRON USA INC	APPALACHIA, LLC		41	154
42)	05-0004-0014-0000-0000	MILLER CHARLES W	CHEVRON USA INC	Not less than 1/8	853	59
		PARSONS PAUL ET UX	CHEVRON USA INC	Not less than 1/8	853	430
	05-0004-0014-0001-0000	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	863	594
		CLIFTON CLARA MAE	CHEVRON USA INC	Not less than 1/8	853	426
		EDWARDS GEORGE ET UX	CHEVRON USA INC	Not less than 1/8	853	418
		KYLE DONNA FAE	CHEVRON USA INC	Not less than 1/8	853	449
		CONNER JUDITH MAY	CHEVRON USA INC	Not less than 1/8	853	445
		SCHEIBELHOOD PAUL ET AL	AB RESOURCES LLC	Not less than 1/8	695	629
		AB RESOURCES LLC	NPAR LLC		25	484
		NPAR LLC	Chevron USA INC		756	332
		Chevron USA INC	HG ENERGY II			
		SLOUGH ANITA L ET AL	APPALACHIA, LLC		41	154
		AB RESOURCES LLC	AB RESOURCES LLC	Not less than 1/8	696	7
		NPAR LLC	NPAR LLC		25	484
		Chevron USA INC	Chevron USA INC		756	332
			HG ENERGY II			
			APPALACHIA, LLC		41	154
43)	05-0004-0010-0000-0000			Not less than		
	05-0004-0011-0001-0000	James D. Dimitro	TriEnergy Holdings	1/8	706	603
	05-0004-0012-0000-0000	TriEnergy Holdings	Chevron USA INC		28	239
		CHEVRON USA INC	HG ENERGY II			
			APPALACHIA, LLC		41	154
44)	05-0004-0013-0001-0000	WEST WAYNE L JR ET UX	AB Resources LLC	Not less than 1/8	697	199
			HG ENERGY II			
		CHEVRON USA INC	APPALACHIA, LLC		41	154
45)	05-0004-0011-0000-0000			Not less than		
	05-0004-0011-0002-0000	Michael L. & Shar J. Mason	TriEnergy Holdings	1/8	729	628
		TriEnergy Holdings	Chevron USA INC		28	239
		CHEVRON USA INC	HG ENERGY II			
			APPALACHIA, LLC		41	154
46)	05-0004-0003-0002-0000	BLAKE LOYE ALFRED	Chevron USA INC	Not less than 1/8	780	221
			HG ENERGY II			
		CHEVRON USA INC	APPALACHIA, LLC		41	154

4705102045



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

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January 23, 2018

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

RE: Drilling Under Roads – MND20 EU  
Franklin District, Marshall County  
West Virginia

Dear Ms. Adkins:

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

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

Very truly yours,

*Diane White*

Diane C. White

Enclosures

CC: Jim Nicholson - Inspector

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

Date of Notice Certification: 01/23/2018

API No. 47-051-2045  
Operator's Well No. MND20 EU  
Well Pad Name: MND20

**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>516847.5</u>
County:	<u>Marshall</u>		Northing:	<u>4411324.4</u>
District:	<u>Franklin</u>	Public Road Access:		<u>SLS 2/1</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.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input checked="" type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p style="padding-left: 40px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p align="center"><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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**Required Attachments:**

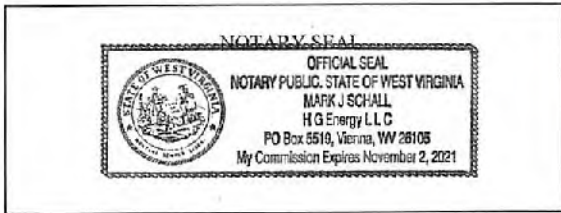
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication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

**Certification of Notice is hereby given:**

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

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

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



Subscribed and sworn before me this 23rd day of January.

*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).

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: 1/29/2018 Date Permit Application Filed: 2/03/2018

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 - Alex O'Neill  
Address: 46226 National Road  
Saint 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: \_\_\_\_\_  
Address: \_\_\_\_\_

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

OPERATOR OF ANY NATURAL GAS STORAGE FIELD  
Name: \_\_\_\_\_  
Address: \_\_\_\_\_

\*Please attach additional forms if necessary

**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

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

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

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



WW-6A  
(8-13)

API NO. 47-4705102045  
OPERATOR WELL NO. MND20 EU  
Well Pad Name: MND20

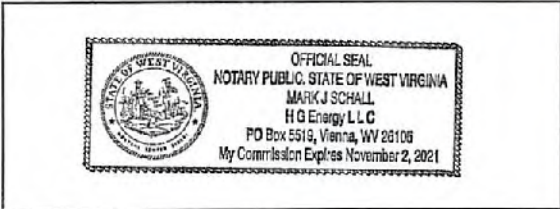
**Notice is hereby given by:**

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

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

**Oil and Gas Privacy Notice:**

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

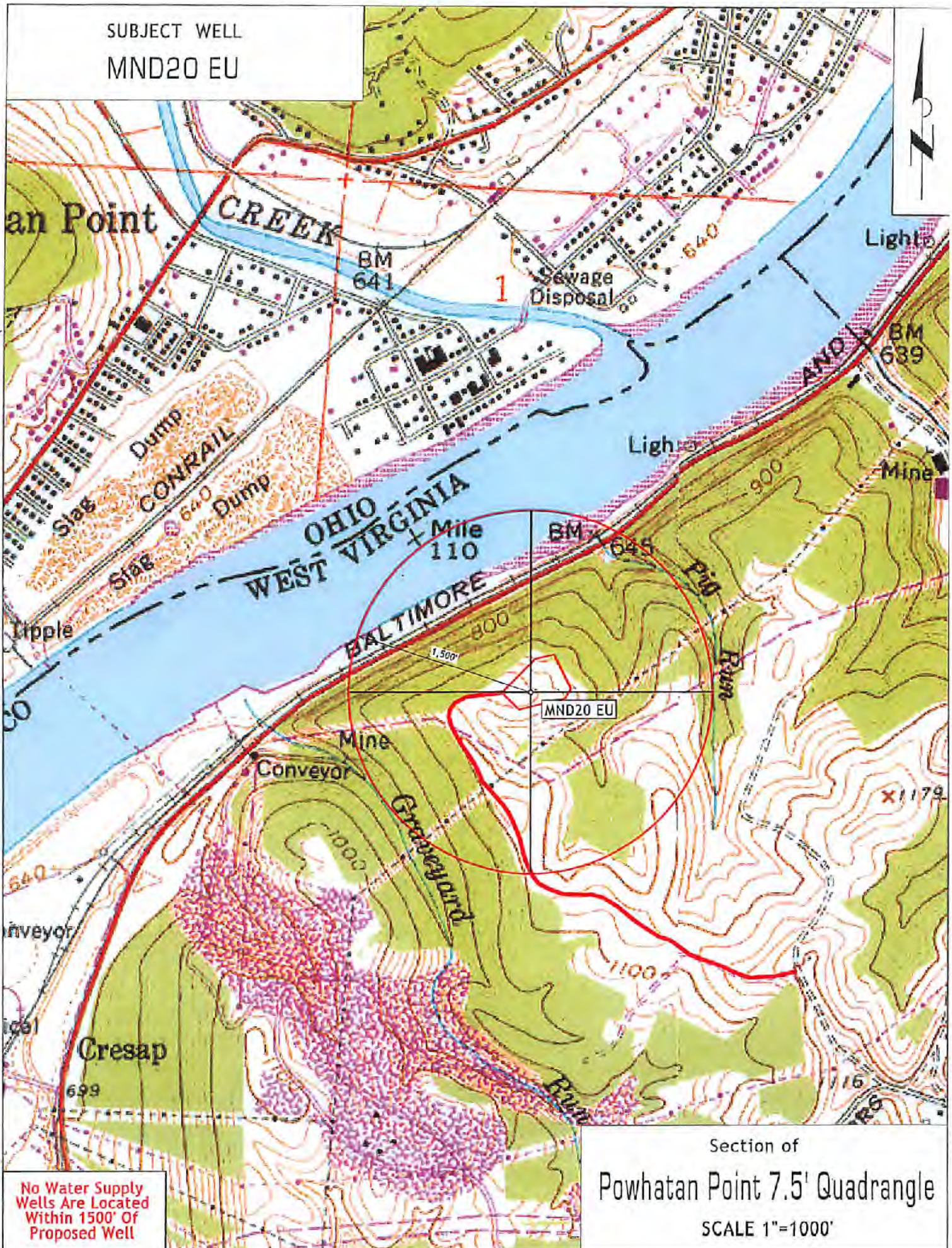


Subscribed and sworn before me this 29th day of January, 2018.

*Mark J Schall*  
\_\_\_\_\_  
Notary Public

My Commission Expires 11/2/2021

SUBJECT WELL  
MND20 EU



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

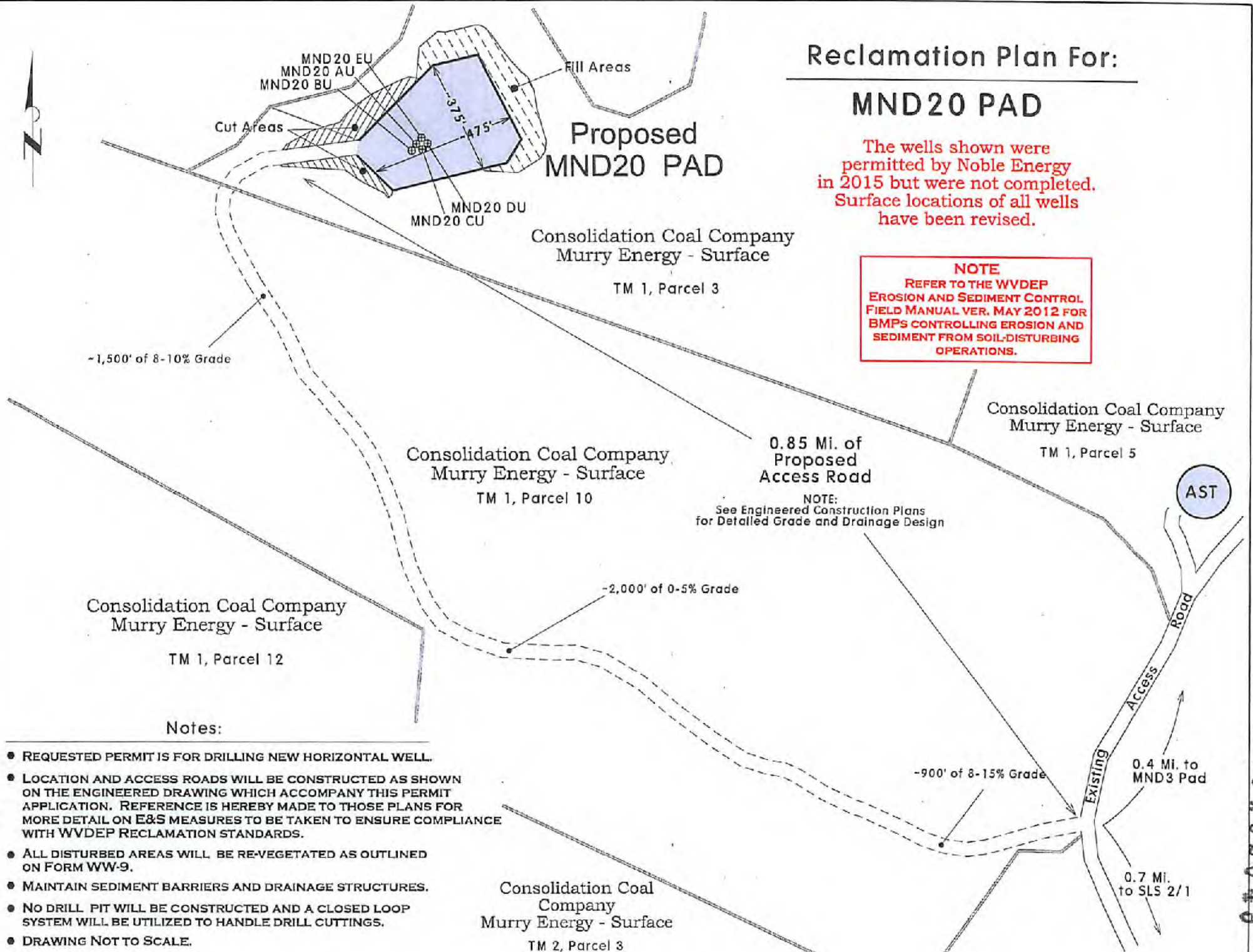
Section of  
Powhatan Point 7.5' Quadrangle  
SCALE 1"=1000'

# Reclamation Plan For:

## MND20 PAD

The wells shown were permitted by Noble Energy in 2015 but were not completed. Surface locations of all wells have been revised.

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



**Notes:**

- REQUESTED PERMIT IS FOR DRILLING NEW HORIZONTAL WELL.
- LOCATION AND ACCESS ROADS WILL BE CONSTRUCTED AS SHOWN ON THE ENGINEERED DRAWING WHICH ACCOMPANY THIS PERMIT APPLICATION. REFERENCE IS HEREBY MADE TO THOSE PLANS FOR MORE DETAIL ON E&S MEASURES TO BE TAKEN TO ENSURE COMPLIANCE WITH WVDEP RECLAMATION STANDARDS.
- ALL DISTURBED AREAS WILL BE RE-VEGETATED AS OUTLINED ON FORM WW-9.
- MAINTAIN SEDIMENT BARRIERS AND DRAINAGE STRUCTURES.
- NO DRILL PIT WILL BE CONSTRUCTED AND A CLOSED LOOP SYSTEM WILL BE UTILIZED TO HANDLE DRILL CUTTINGS.
- DRAWING NOT TO SCALE.

4705102045

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

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

**Notice Time Requirement:** Notice shall be provided at least **TEN (10)** days prior to filing a permit application.

**Date of Notice:** 01/23/2018      **Date Permit Application Filed:** 02/09/2018

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

HAND DELIVERY       CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

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

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

Name: Murray Energy Corporation - Alex O'Neill  
Address: 48226 National Road  
Saint Clairsville, OH 43950

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

**Notice is hereby given:**

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

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>516847.5</u>
County: <u>Marshall</u>	UTM NAD 83 Northing: <u>4411324.4</u>
District: <u>Franklin</u>	Public Road Access: <u>SLS 2/1</u>
Quadrangle: <u>Powhatan Point</u>	Generally used farm name: <u>Consol</u>
Watershed: <u>Short Creek - Ohio River (HUC 10)</u>	

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57<sup>th</sup> Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting [www.dep.wv.gov/oil-and-gas/pages/default.aspx](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

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

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

**Oil and Gas Privacy Notice:**

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

**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:** 01/24/2018      **Date Permit Application Filed:** 02/06/2018

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

CERTIFIED MAIL       HAND  
RETURN RECEIPT REQUESTED      DELIVERY

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

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

Name: Murray Energy Corporation - Alex O'Neill      Name: \_\_\_\_\_  
Address: 46226 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:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>516852.6</u>
County:	<u>Marshall</u>		Northing:	<u>4411319.6</u>
District:	<u>Franklin</u>	Public Road Access:		<u>SLS 2/1</u>
Quadrangle:	<u>Powhatan Point</u>	Generally used farm name:		<u>CONSOL</u>
Watershed:	<u>Short Creek - Ohio River (HUC 10)</u>			

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1) A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 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:	<u>HG Energy II Appalachia, LLC</u>	Address:	<u>5280 Dupont Road</u>
Telephone:	<u>304-420-1119</u>		<u>Parkersburg, WV 26101</u>
Email:	<u>dwhite@hgeneryllc.com</u> <i>Diane White</i>	Facsimile:	<u>304-863-3172</u>

**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).



## WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

**Division of Highways**1900 Kanawha Boulevard East • Building Five • Room 110  
Charleston, West Virginia 25305-0430 • (304) 558-3505Jim Justice  
GovernorThomas J. Smith, P. E.  
Secretary of Transportation/  
Commissioner of Highways

July 28, 2017

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-20 Well Pad, Marshall County

Dear Mr. Martin,

The West Virginia Division of Highways has transferred Permit #06-2012-0609 for the subject site to HG Energy, LLC. for access to the State Road for the well sites located off of Marshall County Route 2/1 SLS.

The operator has signed an 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 January 3, 2012.

Very Truly Yours,

A handwritten signature in cursive script that reads "Gary K. Clayton".

Gary K. Clayton P.E.  
Regional Maintenance Engineer  
Central Office Oil & Gas CoordinatorCc: Diane White  
H G Energy, LLC  
CH, OM, D-6  
File

**HG Energy II Appalachia, LLC**  
**List of Frac Additives by Chemical Name and CAS #**  
**MND20 Well Pad (AU,BU,CU,DU,EU)**

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	

**APPROVED**  
**WVDEP OOG**  
WVS 3/13/2018

# MND 20 WELL PAD ISSUED FOR CONSTRUCTION

## FRANKLIN DISTRICT, MARSHALL COUNTY WEST VIRGINIA FOR

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



**VICINITY MAP**

N.T.S.  
PROPERTY OWNERS FLUID SURFACE TABLE

NAME	GRID ADDRESS	LEFT OF DISTANCE	CLEAR & GRUB (FOOT/FEET)	CLEAR & GRUB (NON-FOOT/FEET)	TOTAL CLEAR & GRUB
MAVAY DRIVE/0000/0100	76.00	6.81	8.14	0.00	8.14
CR-2000-1001-0000-0100	119.00	6.81	2.19	4.30	6.49
CR-2001-0001-0000-0100	61.03	6.81	0.00	0.00	0.00
CONRAD LINDSEY CO., LLC					
CR-2000-1000-0000-0100	113.80	6.81	8.41	0.15	8.57
TOTAL	17.23		12.81	4.35	17.16

SATURDAY SUMMARY

	OUT	FILL	IMP
WELL PAD ACCESS ROAD	11.62	0.26	4.14 (2.0)
WELL PAD	6.18	6.82	2.67 (1.0)
TOTAL FRACTURE EMPOWERMENT	17.80	7.08	6.81 (3.0)

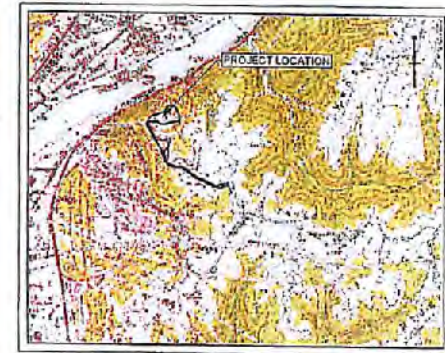
ASSUMPTIONS:  
TERRAIN FACTOR = 8%  
TRUCK BULKHEAD = 12"



THE WEST VIRGINIA 811 SERIAL NUMBER FOR THIS PROJECT IS: 1516222099

**ISSUED FOR CONSTRUCTION**

SHEET	DATE	TITLE
1	FEBRUARY 2016	COVER SHEET
2	FEBRUARY 2016	EXISTING CONDITIONS PLAN (WITH ORTHO PHOTOGRAPHY)
3	FEBRUARY 2016	INDEX SHEET
4	FEBRUARY 2016	DRAINAGE AREAS AND SOILS MAP
5	FEBRUARY 2016	EROSION AND SEDIMENTATION CONTROL PLAN
6	FEBRUARY 2016	EROSION AND SEDIMENTATION CONTROL PLAN
7	FEBRUARY 2016	EROSION AND SEDIMENTATION CONTROL PLAN
8	FEBRUARY 2016	EROSION AND SEDIMENTATION CONTROL PLAN
9	FEBRUARY 2016	COORDINATE GEOMETRY PLAN
10	FEBRUARY 2016	COORDINATE GEOMETRY PLAN
11	FEBRUARY 2016	COORDINATE GEOMETRY PLAN
12	FEBRUARY 2016	COORDINATE GEOMETRY PLAN
13	FEBRUARY 2016	ACCESS ROAD SITE PLAN AND PROFILE
14	FEBRUARY 2016	ACCESS ROAD SITE PLAN AND PROFILE
15	FEBRUARY 2016	ACCESS ROAD SITE PLAN AND PROFILE
16	FEBRUARY 2016	ACCESS ROAD CENTERLINE HORIZONTAL GEOMETRY
17	FEBRUARY 2016	ACCESS ROAD CROSS SECTIONS
18	FEBRUARY 2016	ACCESS ROAD CROSS SECTIONS
19	FEBRUARY 2016	ACCESS ROAD CROSS SECTIONS
20	FEBRUARY 2016	ACCESS ROAD CROSS SECTIONS
21	FEBRUARY 2016	WELL PAD AND ROADWAY CROSS SECTIONS
22	FEBRUARY 2016	SEEDING AND LINING PLAN
23	FEBRUARY 2016	SEEDING AND LINING PLAN
24	FEBRUARY 2016	WELL PAD RECLAMATION PLAN
25	FEBRUARY 2016	SITE CONSTRUCTION DETAILS
26	FEBRUARY 2016	SITE CONSTRUCTION DETAILS
27	FEBRUARY 2016	EROSION AND SEDIMENTATION CONTROL NOTES
28	FEBRUARY 2016	EROSION AND SEDIMENTATION CONTROL NOTES
29	FEBRUARY 2016	EROSION AND SEDIMENTATION CONTROL DETAILS
30	FEBRUARY 2016	EROSION AND SEDIMENTATION CONTROL DETAILS



**LOCATION MAP**

**DIRECTIONS TO MND 20 WELL PAD:**  
FROM MOUNDSVILLE, WV HEAD WEST ONTO WV-2 E (1 MI). TURN LEFT ONTO STATE ROUTE 2 ALI. TURN LEFT IMMEDIATELY ONTO ROBERTS RIDGE ROAD (2.6 MI). CONTINUE ONTO ROBERTS RIDGE ST JOSEPH ROAD (1.9 MI). SLIGHT RIGHT ON TAYLORS RIDGE ROAD (1.2 MI). TURN RIGHT ONTO THE MND 03 ACCESS ROAD (0.25 MI). TURN LEFT ONTO THE MND 20 ACCESS ROAD. THE WELL PAD WILL BE LOCATED APPROXIMATELY 0.70 MI FROM THIS INTERSECTION.

**DIRECTIONS TO MND 20 WELL PAD FOR HEAVY EQUIPMENT:**  
FROM WV ROUTE 2 SOUTH AT TRAFFIC SIGNAL, MAKE A LEFT TURN ONTO WV ALTERNATE 2 (ROUND BOTTOM HILL ROAD) AND TRAVEL 1.54 MILES TO CR 807/5 (LINDSAY LAKE). MAKE A RIGHT ONTO LINDSAY LAKE AND TRAVEL 1.77 MILES TO CR 21 (ROBERTS RIDGE ROAD). MAKE A RIGHT ONTO ROBERTS RIDGE ROAD AND TRAVEL 3.38 MILES TO CR 2/1 (TAYLORS RIDGE/MCFARLAND RUN). MAKE A RIGHT ONTO TAYLORS RIDGE/MCFARLAND RUN ROAD AND TRAVEL 1.25 MILES TO INTERSECTION. MAKE A RIGHT AND FOLLOW ROAD UNTIL YOU REACH A GATE. TRAVEL THROUGH THE GATE TO INTERSECTION. MAKE A RIGHT AND TRAVEL FOR 800 FEET TO THE LEASE ROAD ON THE RIGHT.

**RECEIVING WATERWAY:**  
PIG RUN  
CLASS B1 - WARM WATER (AQUATIC)  
RESIDING IN UPPER OHIO SOUTH WATERSHED

**MND 20 WELL PAD TOPHOLE COORDINATES**

WELL NUMBER	WV-8-N BATHYMETRY	WV-8-N UTM/Easting	WV-8-N UTM/Northing	WV-27-N BATHYMETRY	WV-27-N UTM/Easting	WV-27-N UTM/Northing	UTM-83-17 EASTINGS (M)	UTM-83-17 NORTHINGS (M)	UTM-83-17 EASTINGS (MI)	UTM-83-17 NORTHINGS (MI)
MND01-1	29.851730081	69.808994772	29.995907993	160260.135	69.851558333	69.819191944	470060.820	1591123.630	441339.507	510097.471
MND01-2	29.851535266	69.809244137	29.995907993	160260.135	69.851558333	69.809711944	470060.820	1591123.630	441339.507	510097.471
MND01-3	29.851734444	69.808754157	29.995907993	160260.135	69.851558333	69.809711944	470060.820	1591123.630	441339.507	510097.471
MND01-4	29.851734444	69.808754157	29.995907993	160260.135	69.851558333	69.809711944	470060.820	1591123.630	441339.507	510097.471
MND01-5	29.851734444	69.808754157	29.995907993	160260.135	69.851558333	69.809711944	470060.820	1591123.630	441339.507	510097.471
ROAD ENTRANCE	29.851535266	69.794332276	29.995907993	160260.135	69.851558333	69.794332276	470060.820	1591123.630	441339.507	510097.471
WELL PAD CENTER	29.851535266	69.807895966	29.995907993	160260.135	69.851558333	69.807895966	470060.820	1591123.630	441339.507	510097.471

NO.	BY	DATE	REVISION	DESCRIPTION

DESIGNED	BY	DATE

**HG ENERGY II, APPALACHIA LLC**  
PARKERSBURG, WEST VIRGINIA

Michael Baker International  
MICHAEL BAKER INTERNATIONAL  
CONSULTING ENGINEERS  
MOON TOWNSHIP, PENNSYLVANIA



**MND 20 CONSTRUCTION PLANS**  
COVER SHEET

FRANKLIN DISTRICT  
MARSHALL COUNTY, WEST VIRGINIA

SCALE: AS SHOWN  
DATE: FEBRUARY, 2016

SHEET NO.  
**1**  
OF 30

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MAR 8 2018

WV Department of  
Environmental Protection

Sheet 1-15



- NOTES
1. HAVING AND TOPOGRAPHY PROVIDED BY BLUE WOODMAN AERIAL MAPPING 11222 LASHI JOHN HIGHWAY SURVEY, WEST VIRGINIA 26862. PHONE: (304) 682-5995. FAX: (304) 682-5601. DATE OF PHOTOGRAPHY: 6-19-14. COORDINATE METHOD: 2 7009.
  2. STATIONS 5-988 REPRESENT HORIZONTAL DISTANCES ALONG ALIGNMENTS.
  3. WELL PAD AREA - 104,819 SQ. FT.
  4. LIMIT OF DISTURBANCE - 17.26 ACRES.
  5. PROPERTY LINE DATA PROVIDED BY NOBLE ENERGY.
  6. FILL COMPACTED TO 90% OF STANDARD PROCTOR DENSITY (ASTM D-1557). FILL WILL BE FREE OF COLLECTIBLE MATERIAL NOTHING LARGER THAN 4" ROCK LIFTS WILL BE NO GREATER THAN 3FT.

**LEGEND**

**EXISTING**

- EXISTING SPOT ELEVATION
- EXISTING INDEX CONTOUR
- EXISTING INTERIM CONTOUR
- EXISTING STREAM
- EXISTING FENCE LINE
- EXISTING DRAIN
- EXISTING UTILITY
- EXISTING POWER AND OVERHEAD ELECTRIC LINE
- EXISTING PIPELINE & MARKER
- PROPERTY LINE
- STREAM BUFFER
- SOIL BOUNDARY AND TYPE
- SURVEY CONTROL MONUMENT
- CLASSIFIED PERENNIAL STREAM
- CLASSIFIED INTERMITTENT STREAM
- CLASSIFIED EPHEMERAL STREAM
- PDM DELINEATED WETLAND
- PFD DELINEATED WETLAND
- PFS DELINEATED WETLAND

**PROPOSED**

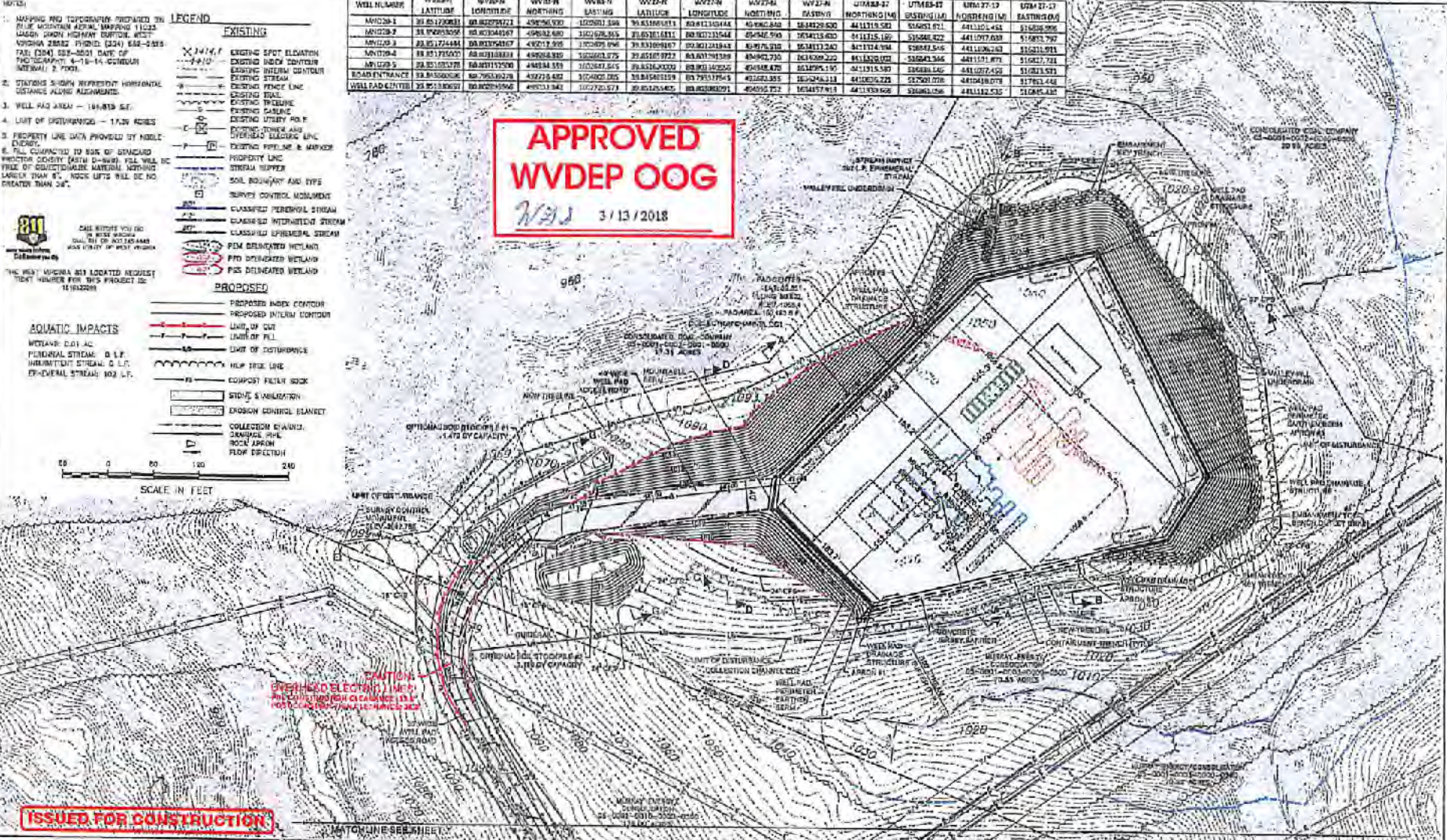
- PROPOSED INDEX CONTOUR
- PROPOSED INTERIM CONTOUR
- LINE OF CUT
- LINE OF FILL
- LIMIT OF DISTURBANCE
- HELP FIRE LINE
- COMPOST FILTER BASK
- STONE S/VEGETATION
- EROSION CONTROL BLANKET
- COLLECTION DRAINAGE CHANNEL PIPE
- ROCK APRON
- FLOOR PROTECTION

WELL NUMBER	WVDEP-N LATITUDE	WVDEP-N LONGITUDE	WVDEP-N NORTHING	WVDEP-N EASTING	WVDEP-N LATITUDE	WVDEP-N LONGITUDE	WVDEP-N NORTHING	WVDEP-N EASTING	UTM83-ZONE	UTM83-EASTING	UTM83-NORTHING	UTM83-ZONE	UTM83-EASTING	UTM83-NORTHING
WVDEP-1	38.851720681	80.802879213	498766330	1020801346	38.851866613	80.812134444	498766348	1020802930	18QUR83-Z	8411319.082	5156051.071	18QUR83-Z	8411322.454	5156053.996
WVDEP-2	38.962930509	80.803495967	499582480	1020762835	38.963261811	80.803131644	499582496	1020761900	18QUR83-Z	8411315.180	5156048.422	18QUR83-Z	8411317.639	5156051.792
WVDEP-3	38.851724484	80.803374917	498771926	1020809196	38.851999667	80.803121848	498771942	1020811240	18QUR83-Z	8411314.934	5156049.545	18QUR83-Z	8411316.463	5156051.911
WVDEP-4	38.851725007	80.803188814	498782480	1020801675	38.851979723	80.803179138	498782496	1020802200	18QUR83-Z	8411319.082	5156051.071	18QUR83-Z	8411322.454	5156053.996
WVDEP-5	38.851725376	80.803115706	498784818	1020801675	38.851982020	80.803179138	498784824	1020802200	18QUR83-Z	8411319.082	5156051.071	18QUR83-Z	8411322.454	5156053.996
ROAD ENTRANCE	38.858586666	80.795382628	499234882	1020802182	38.858861119	80.795379145	499234898	1020802200	18QUR83-Z	8411319.082	5156051.071	18QUR83-Z	8411322.454	5156053.996
WELL PAD CENTER	38.951300627	80.802959566	499333342	1020770573	38.951625465	80.802920921	499333358	1020771913	18QUR83-Z	8411319.082	5156051.071	18QUR83-Z	8411322.454	5156053.996

**APPROVED**  
**WVDEP OOG**  
*WVDEP* 3/13/2018

**AQUATIC IMPACTS**

WETLAND: 631 AC  
 PERENNIAL STREAM: 0.4 LF  
 INTERMITTENT STREAM: 0.1 LF  
 EPHEMERAL STREAM: 102 LF



NO.	DATE	REVISION

DESIGNED	BY	DATE
DRAWN	AL	
CHECKED	AL	
REVIEWED	CAR	
A.C.	14448	

**HG ENERGY II, APPALACHIA LLC**  
PARKERSBURG, WEST VIRGINIA

**Michael Baker INTERNATIONAL**

MICHAEL BAKER INTERNATIONAL  
CONSULTING ENGINEERS  
MOON TOWNSHIP, PENNSYLVANIA



**MND 20 CONSTRUCTION PLANS**  
**EROSION AND SEDIMENTATION**  
**CONTROL PLAN**

FRANKLIN COUNTY  
MARSHALL COUNTY, WEST VIRGINIA

SCALE: AS SHOWN      DATE: FEBRUARY, 2018

PROJECT NO.	
DRAWING NO.	<b>8</b>
SHEET NO.	<b>30</b>

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