



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Tuesday, November 5, 2019
WELL WORK PERMIT
Horizontal 6A / New Drill

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

Re: Permit approval for MCDONALD 1211 N-5H
47-041-05701-00-00

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. Marlin
Chief

Operator's Well Number: MCDONALD 1211 N-5H
Farm Name: HG ENERGY II APPALACHIA
U.S. WELL NUMBER: 47-041-05701-00-00
Horizontal 6A New Drill
Date Issued: 11/5/2019

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

API Number: _____

PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.



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Austin Caperton, Cabinet Secretary
dep.wv.gov

**ORDER
ISSUED UNDER
WEST VIRGINIA CODE, CHAPTER 22, ARTICLE 6A**

TO: HG Energy II Appalachia, LLC
5260 Dupont Circle
Parkersburg, WV 26101

DATE: October 16, 2019
ORDER NO.: 2019-W-13

INTRODUCTION

This Order (hereinafter "Order") is issued by the Office of Oil and Gas (hereinafter "OOG"), by and through its Chief, pursuant to the authority of W. Va. Code §§ 22-1-1, 22-6-1 and 22-6A-1 *et seq.* to HG Energy II Appalachia, LLC (hereinafter "HG Energy" or "Operator"), collectively the "Parties."

FINDINGS OF THE CHIEF

In support of this Order, the Chief hereby finds the following:

1. OOG, an office within the West Virginia Department of Environmental Protection, is the agency with the duty and authority to execute and enforce W. Va. Code §22-6-1 and §22-6A-1 *et seq.*, and the rules and regulations promulgated thereunder.
2. HG Energy is a "person" as defined by W. Va. Code §22-6-1(n), with a corporate address as 5260 Dupont Circle, Parkersburg, WV 26101.
3. On August 16, 2019 HG Energy submitted a well work permit application identified as API# 47-041-05701. The proposed well is to be located on the McDonald 1211 Pad in the Freemans Creek District of Lewis County, West Virginia.
4. On August 16, 2019 HG Energy requested a waiver for Wetland K outlined in Attachment I, from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-041-05701.

CONCLUSIONS OF LAW

1. West Virginia Code §22-1-6(d) requires, in part, that “in addition to other powers, duties and responsibilities granted and assigned to the secretary by this chapter, the secretary is authorized and empowered to... (3) Enter private lands to make surveys and inspections for environmental protection purposes; to investigate for violations of statutes or rules which the Office of Oil and Gas is charged with enforcing; to serve and execute warrants and processes; to make arrests; issue orders, which for the purposes of this chapter include consent agreements; and to otherwise enforce the statutes or rules which the Office of Oil and Gas is charged with enforcing.”
2. West Virginia Code §22-6A-2(a)(6) requires, in part, that “Concomitant with the broad powers to condition the issuance of well work permits, the secretary should also have broad authority to waive certain minimum requirements of this article when, in his or her discretion, such waiver is appropriate: *Provided*, That the secretary shall submit a written report of the number of waivers granted to the Legislature commencing January 1, 2013, and each year thereafter.”
3. West Virginia Code §22-6A-12(b) requires, in part, that “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 Office of Oil and Gas 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 Office of Oil and Gas 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.”

ORDER

West Virginia Code §22-6A-12(b) requires, in part, that “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. The Office of Oil and Gas grants the request for a waiver for Wetland K from well location restriction requirements in W. Va. Code §22-6A-12(b) for the well work permit application identified as API# 47-041-05701. The Office of Oil and Gas hereby **ORDERS** that HG Energy shall meet the following site construction and operational requirements for the McDonald 1211 Well Pad:

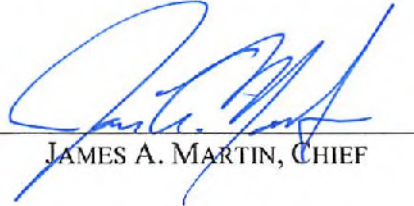
- a. A berm shall be constructed around the perimeter of the pad to contain any potential spills and storm water runoff. Berm is to be at least twenty-four inches (24”) in height;
- b. Erosion control blankets shall be installed on all slopes and down gradient locations of the pad as erosion and sediment controlling BMPs;
- c. Wetland K is above the cut slope from the proposed well pad thus no run off from construction will reach the wetland;
- d. Disturbed areas not used for operations shall be seeded and mulched per the seeding tables in the WVDEP-OOG Erosion and Sediment Control Manual;
- e. Drill cuttings and associated drilling mud shall be disposed of in a permitted landfill;
- f. Waste generated by the flowback treatment systems shall be sent to offsite disposal at a permitted landfill;
- g. Weekly site inspections shall be conducted to monitor and maintain the integrity of the BMP storm water controls;
- h. Weekly storm water and spill prevention inspections shall be conducted focusing on storm water and spill prevention BMPs and maintenance of these BMPs;
- i. Inspections of the storm water and spill prevention measures shall be conducted after any major storm event defined as a half inch (½”) rain within any twenty-four (24) hour period;
- j. Pad inspections shall be conducted no less than once a week to identify and mitigate potential deficiencies;
- k. All records from inspections shall be maintained on site for the life of the project and be available upon request.

Thus ORDERED, the 16th day of October, 2019.

IN THE NAME OF THE STATE OF WEST VIRGINIA:

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

By:



JAMES A. MARTIN, CHIEF

SETBACK WAIVER REQUEST
1211 WELL PAD PROJECT
LEWIS COUNTY, WEST VIRGINIA

Submitted to:

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
601 57TH STREET
CHARLESTON, WEST VIRGINIA 25305

Prepared for:

HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD
PARKERSBURG, WEST VIRGINIA 26101

Prepared by:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
600 MARKET PLACE, SUITE 200
BRIDGEPORT, WEST VIRGINIA 26330

CEC Project 190-016

August 2019

Office of Conservation
AUG 16 2019
WV Department of
Environmental Protection



Civil & Environmental Consultants, Inc.



August 8, 2019

Mr. James Martin, Chief
West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street
Charleston, West Virginia 25304

Dear Mr. Martin:

Subject: Setback Waiver Request
HG Energy II Appalachia, LLC
1211 Well Pad Project
Lewis County, West Virginia
CEC Project 190-016

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1.0 INTRODUCTION

On behalf of HG Energy II Appalachia, LLC (HG Energy), Civil & Environmental Consultants, Inc., (CEC) is submitting a Setback Waiver Request pursuant to Chapter 22 Article 6A Section 12 of West Virginia Code. HG Energy is requesting a waiver for one wetland which lies within 100-feet from the limit of disturbance (LOD) of the proposed 1211 Well Pad Project located in Lewis County, West Virginia.

HG Energy is proposing to construct a natural gas well pad with attendant facilities and associated access roads. The total LOD for the 1211 Well Pad Project is 20.96 acres and will support up to ten horizontal wells. The waiver request form is included as Attachment A and the following sections provide a detailed description as required by the waiver.

2.0 WETLAND WAIVER REQUEST

Question 1: Describe the proposed project location, including unique identifying names of all wetlands, and the names of perennial streams for which the waiver is sought.

The proposed 1211 Well Pad Project is located in northern Lewis County, West Virginia near the town of Kincheloe, as shown on the attached portion of the West Milford, West Virginia USGS quadrangle map (Attachment B). The proposed well pad LOD is within 100-feet of one wetland, Wetland K. Wetland K is located approximately 7.03 linear feet to the northeast of the proposed well pad LOD.

Question 2: Justify the proposed activity by describing alternatives to this project that were considered

a. Include a No-Action Alternative as to show "the future without the project".

Mr. James Martin
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The No-Action alternative does not represent “no alteration” of the existing environment, as future development could likely occur. However, under this alternative, the 1211 Well Pad Project would not be constructed and would produce no immediate environmental impacts and, consequently would not require a waiver; however, this option would not fulfill the project’s purpose and need.

b. Location alternatives must be shown.

Prior to the currently proposed design of the 1211 Well Pad, HG Energy considered a design with a larger footprint for the well pad area of the project (PP02, Attachment C). This design required filling the entirety of Wetland K. This design also included a different configuration for soil stockpiles, and lacked an onsite aboveground storage tank.

The final design has a smaller footprint for the 1211 Well Pad site. This final design does not include impacts to Wetland K, but necessitates a wetland waiver due to the proximity of the new proposed well pad LOD to Wetland K.

The proposed design represents the minimum degradation alternative and HG Energy’s commitment to reducing aquatic impacts to the furthest extent practicable while still meeting the projects purpose and need; however, a waiver is now required for Wetland K. The proposed Site Plans are included as Attachment D.

c. Must demonstrate why a one hundred foot buffer cannot be maintained.

Maintaining a 100-foot buffer from all on-site wetlands and streams was not feasible due to topographic restraints and location of the existing features. To maintain a 100-foot buffer from Wetland K, the pad would need to be shifted to the south or southwest. Shifting the well pad to the south would impact several identified potential roost trees and shift the well pad onto a steeper grade, requiring more earthwork. This would increase the size of proposed soil stockpiles and would require a larger footprint for the project overall. Shifting the well pad to the southwest would cause impacts to an additional stream, Watercourse J (Attachment D, Sheet 6), as well as introducing the same earthwork and stability issues present with shifting the well pad to the south.

The only other alternative to meet the setback requirements would be a reduction in the project’s footprint and the proposed design represents the minimum footprint required to meet the projects purpose and need. A reduction in the pad’s limits would mean the project could not be developed.

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- d. Describe how the proposed project is the least environmentally damaging practicable alternative.*

The proposed 1211 Well Pad design represents the alternative which reduces permanent impacts to the greatest degree. The conceptual design would have reduced the need to obtain wetland waivers but instead would have resulted in additional impacts, large amounts of earthwork, potentially less stable graded slopes, and a larger project footprint due to the necessary soil stockpile.

Question 3: Identify sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect waters of the state. This description should include all additional erosion and sediment control measures and devices that will be used.

As part of their permitting process, HG Energy has prepared an Erosion and Sedimentation Control Plan (E&SCP) specific for this project which stipulates specific seed mix for post-construction soil stabilization. The E&SCP will be implemented to reduce soil erosion, compaction, and sedimentation of receiving streams and wetlands. Proper construction sequencing and implementation of the E&SCP will ensure water quality impacts are minimized throughout the project area. HG Energy will also ensure that any contaminants will be strictly controlled. Furthermore, appropriate stormwater management features and culverts will be installed along the access roads to prevent the damming and funneling of water that might otherwise reach wetland areas.

Question 4: Provide mapping, plans, specifications and design analysis for the preferred alternative to the project.

- a. Specify in writing what additional controls, measures, devices, monitoring, etc. will be used to protect wetlands and/or perennial streams for which the waiver is sought.*

West Virginia Department of Environmental Protection approved erosion and sediment controls will be maintained continuously throughout the project. Diversion Ditches 1 and 2 will be constructed around the northeastern limits of the well pad that will direct water into a roadside ditch and a riprap outfall, respectively. The riprap outfall will serve to slow the velocity of concentrated water flows to reduce erosion and minimize sedimentation.

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The following attachments are included with this waiver request:

- Attachment A: Wetland Waiver Request Form
- Attachment B: Site Location Map
- Attachment C: Conceptual Plans
- Attachment D: Proposed Final Site Plans

3.0 CLOSING

We appreciate your review of this Wetland Waiver Request. Please contact Jared Stemple at (740) 336-2477, or at jstemple@hgenergyllc.com, if you have any questions or require additional information.

Respectfully submitted,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC

Anthony Ludovici
Assistant Project Manager

Jacquelyn Kester
Principal

Enclosures

cc: Mr. Jared Stemple, HG Energy II Appalachia, LLC

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ATTACHMENT A

WETLAND WAIVER REQUEST FORM

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11/3/14

Wetland and Perennial Stream Waiver Request

API Number: Not yet assigned

Operator's Well Number: _____

Well Operator: HG Energy II Appalachia, LLCWell Number: N-1H, N-2H, N-3H, N-4H, N-5H, S-6H, S-7H, S-8H, S-9H, S-10HWell Pad Name: 1211 Well PadCounty, District, Quadrangle of Well Location: Lewis County, Freemans Creek District, West Milford Quad

Answer the questions below to request a waiver from West Virginia Department of Environmental Protection for any wetlands or perennial streams which lie within one hundred feet of proposed project Limit of Disturbance (LOD), which includes any erosion and sediment control devices to be used.

This waiver shall be requested pursuant to Chapter 22 Article 6A Section 12 of West Virginia Code, which states:

§22-6A-12(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.

§22-6A-12(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.

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11/3/14

Wetland and Perennial Stream Waiver Request

API Number: Not yet assigned

Operator's Well Number: _____

Answer in the space provided, or use additional pages as necessary to fully answer the questions below:

- 1. Describe the proposed project location, including unique identifying names of all wetlands, and the names of perennial streams for which the waiver is sought.**

Please refer to Section 2.0, Question 1 of the letter.

- 2. Justify the proposed activity by describing alternatives to this project that were considered.**

- a. Include a No-Action Alternative as to show "the future without the project"
- b. Location Alternatives must be shown
- c. Must demonstrate why a one hundred foot buffer cannot be maintained
- d. Describe how the proposed project is the least environmentally damaging practicable alternative

Please refer to Section 2.0, Question 2 of the letter.

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11/3/14

Wetland and Perennial Stream Waiver Request

4704105701

API Number: Not yet assigned

Operator's Well Number: _____

- 3. Identify sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. This description should include all additional erosion and sediment control measures and devices that will be used.**

Please refer to Section 2.0, Question 3 of the letter.

- 4. Provide mapping, plans, specifications and design analysis for the preferred alternative to the project.**

- a. Specify in writing what additional controls, measures, devices, monitoring, etc. will be used to protect these wetlands and/or perennial streams for which the waiver is sought.**

Please refer to Section 2.0, Question 4 of the letter.

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ATTACHMENT B
SITE LOCATION MAP

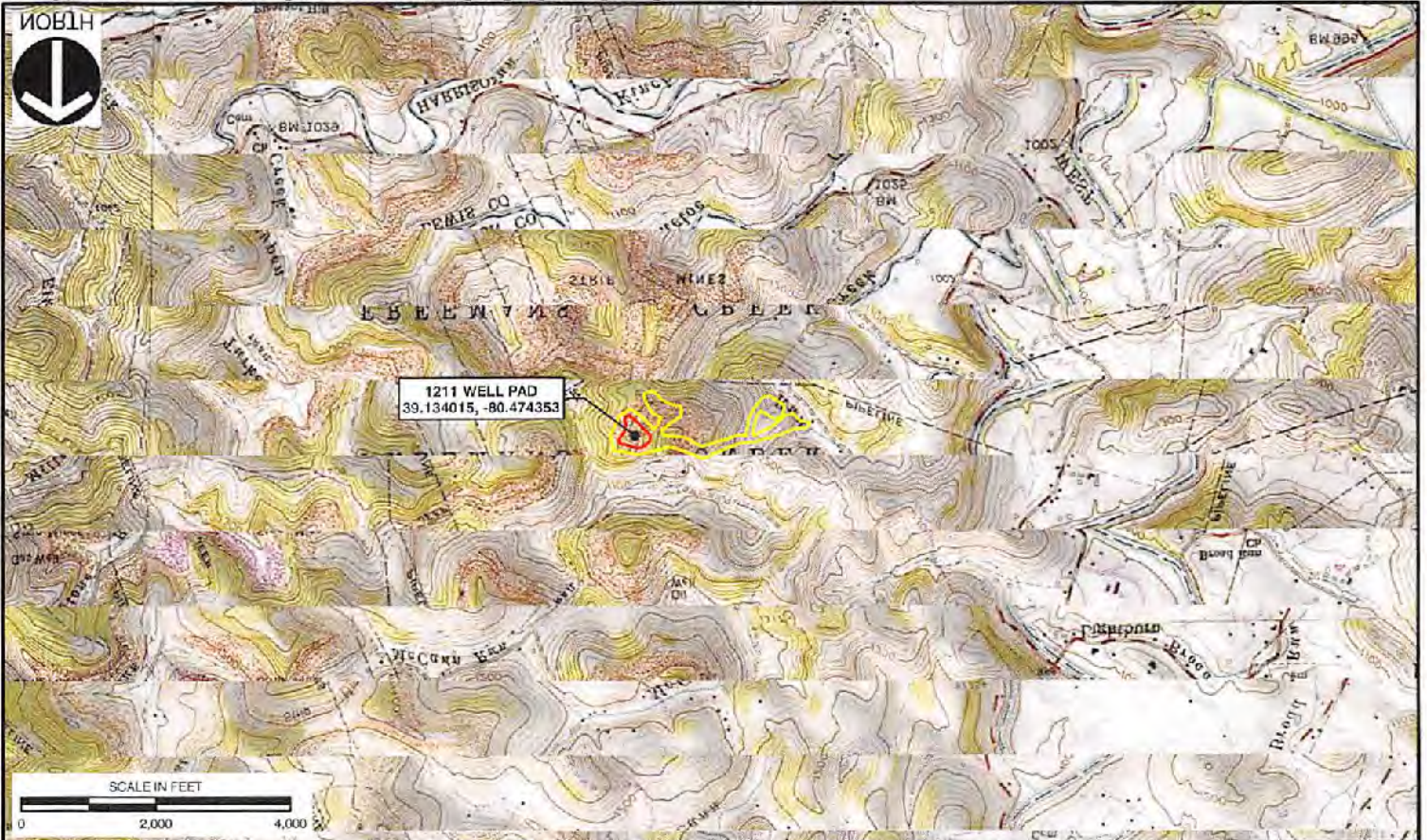
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LEGEND LOD WELL PAD	C&E Environmental Consultants, Inc. 600 Marketplace Avenue, Suite 200 - Bridgeport, WV 26330-9121 Ph: 304-933-3119 • Toll: 855-400-9539 • Fax: 304-933-3327 www.ccecinc.com		HG ENERGY II APPALACHIA, LLC 1211 WELL PAD LEWIS COUNTY, WEST VIRGINIA	
	REFERENCE 1. USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/USA_TOPO_MAPS , ACCESSED 8/8/2019 WEST MILFORD, WEST VIRGINIA QUAD		USGS SITE LOCATION MAP	
DRAWN BY: MWT DATE: 08/08/2019	CHECKED BY: AJL SCALE: 1" = 2,000'	APPROVED BY: PROJECT NO: 190-016.AW00	FIGURE NO: 1	

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ATTACHMENT C
CONCEPTUAL PLANS

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ATTACHMENT D

PROPOSED FINAL SITE PLANS

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AUG 16 2019
WV Department of Environmental Protection

LEGEND	
EXISTING INDEX CONTOURS & CONTOUR LABELS	PROPOSED INDEX CONTOURS & CONTOUR LABELS
EXISTING INTERMEDIATE CONTOURS	PROPOSED INTERMEDIATE CONTOURS
EXISTING TAX PARCEL PROPERTY LINE	DELINEATION STUDY AREA (ADJ)
EXISTING RIGHT OF WAY LINE	PROPOSED LIMITS OF DISTURBANCE
EXISTING ROADS (UNPAVED)	PROPOSED UTILITY POLE
EXISTING ROADS (PAVED)	PROPOSED GRVEL SURFACE AREA
EXISTING ROAD CENTERLINE	PROPOSED ROAD AREA
EXISTING LOGGING ROADS (UNPAVED)	PROPOSED WELL PAD AREA
EXISTING QUADRANT	PROPOSED WELL PAD BERM AREA
EXISTING FENCE LINE	PROPOSED TANK PAD AREA
EXISTING TREE LINE	PROPOSED SPILL AREA
EXISTING OVERHEAD ELECTRIC LINE	PROPOSED 8" FILTER SOCK
EXISTING OVERHEAD WIRE	PROPOSED 18" FILTER SOCK
EXISTING UTILITY POLE	PROPOSED 42" SUBMERGED HD
EXISTING GAS PIPELINE	PROPOSED DIVERSION DITCH
EXISTING OVERHEAD TELEPHONE LINE	PROPOSED ROADSIDE DREN
EXISTING UNDERGROUND ELECTRIC LINE	PROPOSED TYPICAL UNDER DRAIN TRENCH
EXISTING UNDERGROUND WATER LINE	PROPOSED CHAIN LINK SAFETY FENCE
EXISTING WETLAND	PROPOSED SWING GATE
EXISTING STREAM	PROPOSED ORANGE CONSTRUCTION FENCE
FEMA FLOODPLAIN BOUNDARY	PROPOSED FILL FOUNDATION KEY
EXISTING GAS WELL	PROPOSED SUBSURFACE DRAIN
EXISTING SANITARY SEWER MANHOLE	PROPOSED CULVERT
EXISTING INLET	PROPOSED RIPRAP
	PROPOSED ROCK CHECK DAM
	PROPOSED CUT LINE
	PROPOSED FILL LINE
CROSS SECTION LOCATION	PROPOSED FINAL GRADE SLOPE LABELS
POTENTIAL ROUST TREE	RESTORED AREA
BORE HOLE LOCATION	ROAD/PAD TO REMAIN AFTER RECLAMATION

REVISION RECORD

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

CEC
Civil & Environmental Consultants, Inc.
100 University Ave., Suite 200, Bridgeport, WV 26309
PH: 304.333.3310 FAX: 304.333.3327

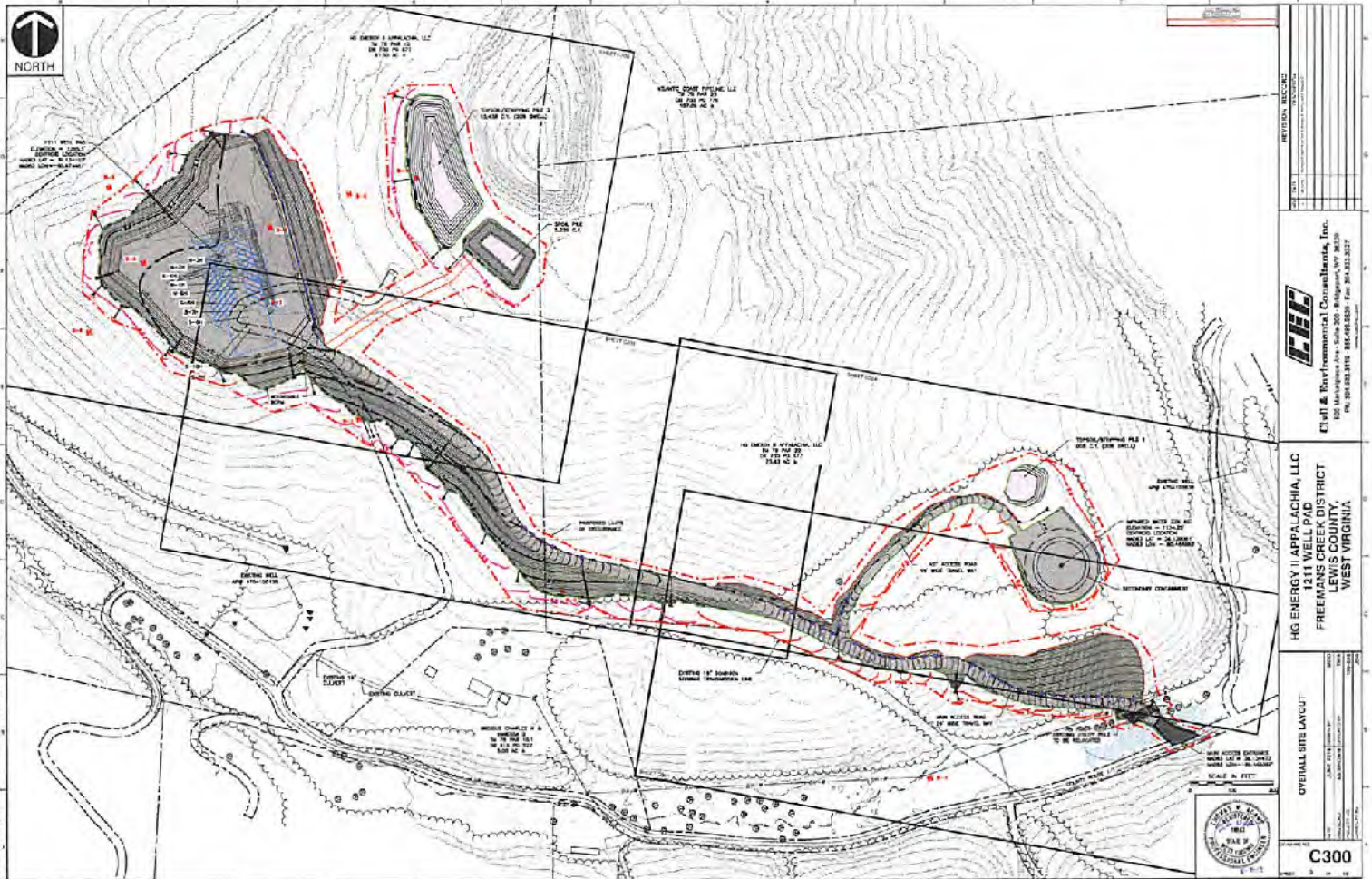
HG ENERGY II APPALACHIA, LLC
1211 WELL PAD
FREEMANS CREEK DISTRICT
LEWIS COUNTY,
WEST VIRGINIA

MASTER LEGEND

C001

DATE: 08/16/19
SCALE: AS SHOWN
DRAWN BY: [Name]
CHECKED BY: [Name]
APPROVED BY: [Name]

4704105701

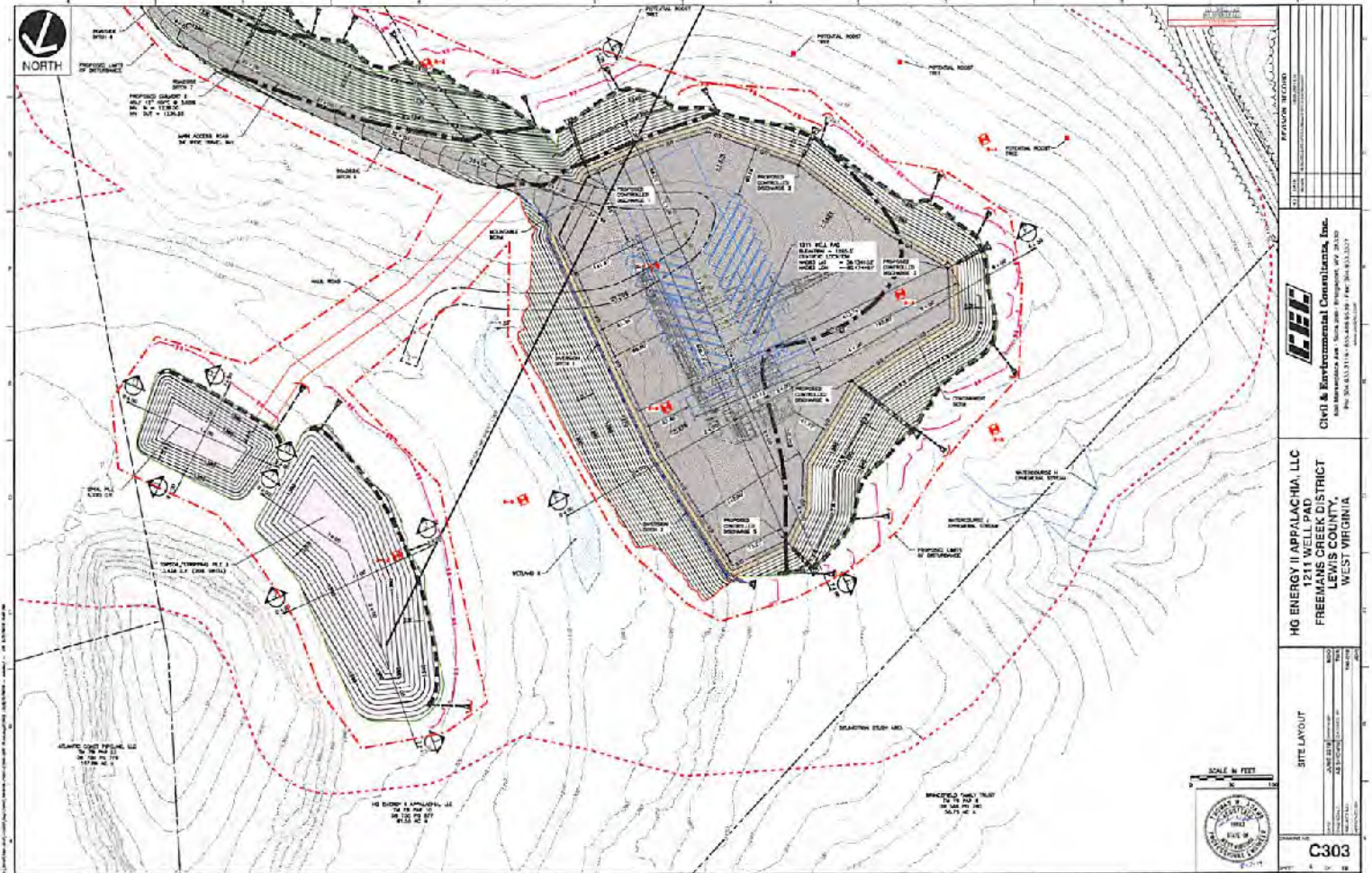


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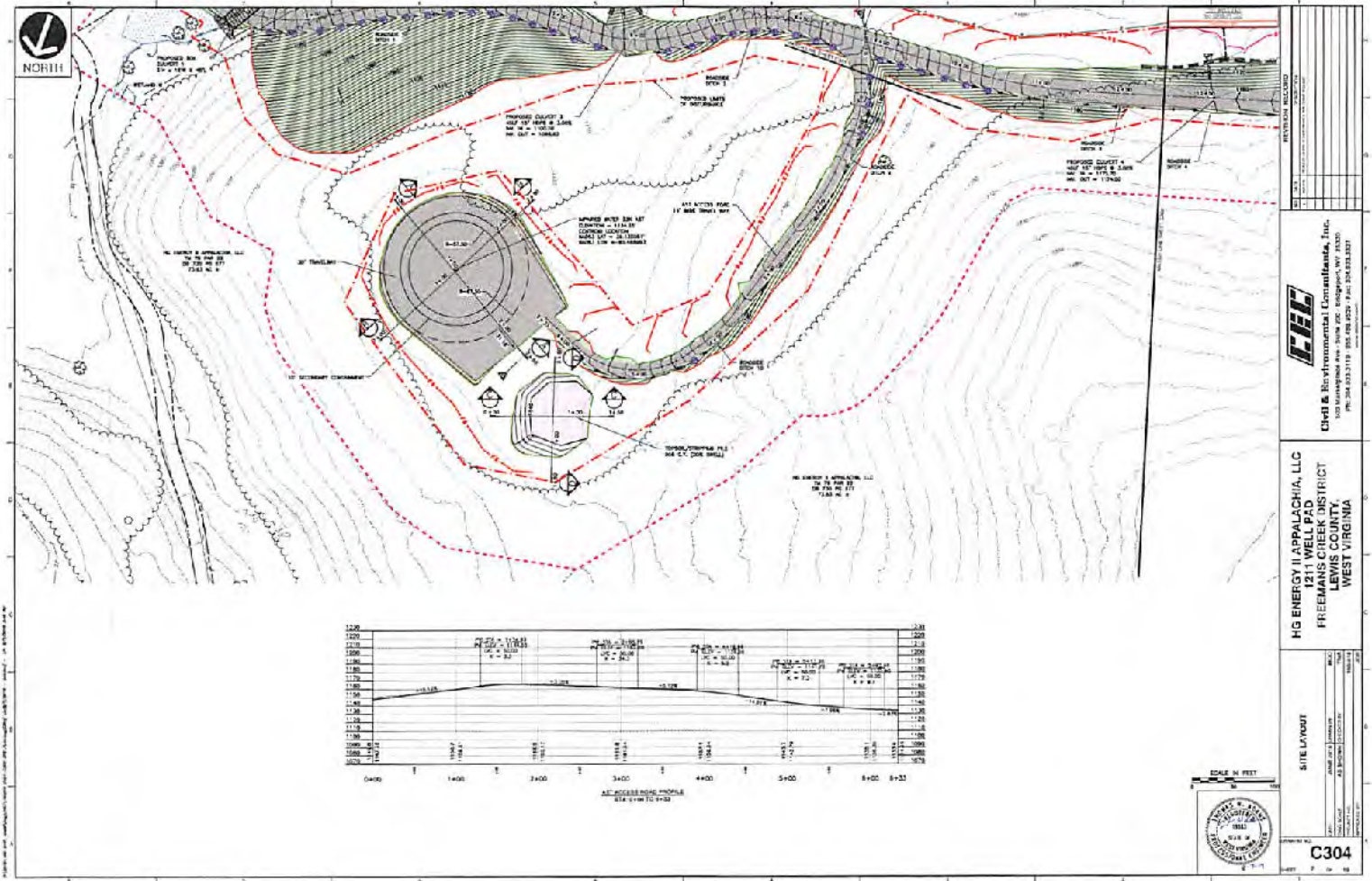


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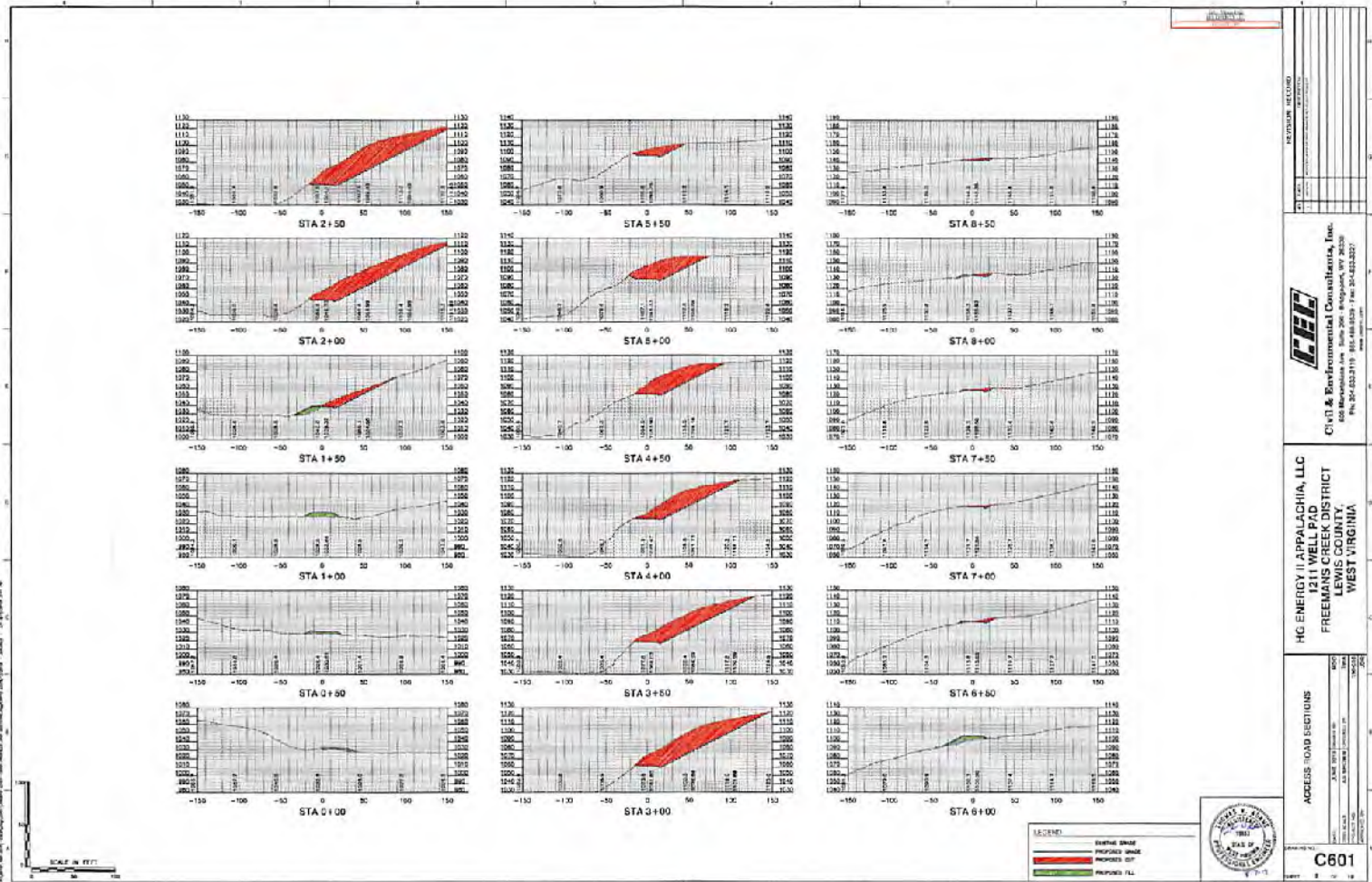
CGE
 Carl & Environmental Consultants, Inc.
 100 Management Ave. Suite 202 - Inglewood, WV 26024
 PH: 304.833.3110 FAX: 304.833.3327

HG ENERGY II APPALACHIA, LLC
 1211 WELL PAD
 FREEMANS CREEK DISTRICT
 LEWIS COUNTY,
 WEST VIRGINIA

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4704105701



REVISION RECORD

NO.	DATE	DESCRIPTION

CEC
 Civil & Environmental Consultants, Inc.
 600 Monmouth Ave. Suite 200, Bridgeton, NJ 08302
 PH: 856-682-7119 FAX: 856-682-2227

HC ENERGY II APPALACHIA, LLC
 1211 WELL PAD
 FREEMANS CREEK DISTRICT
 LEWIS COUNTY,
 WEST VIRGINIA

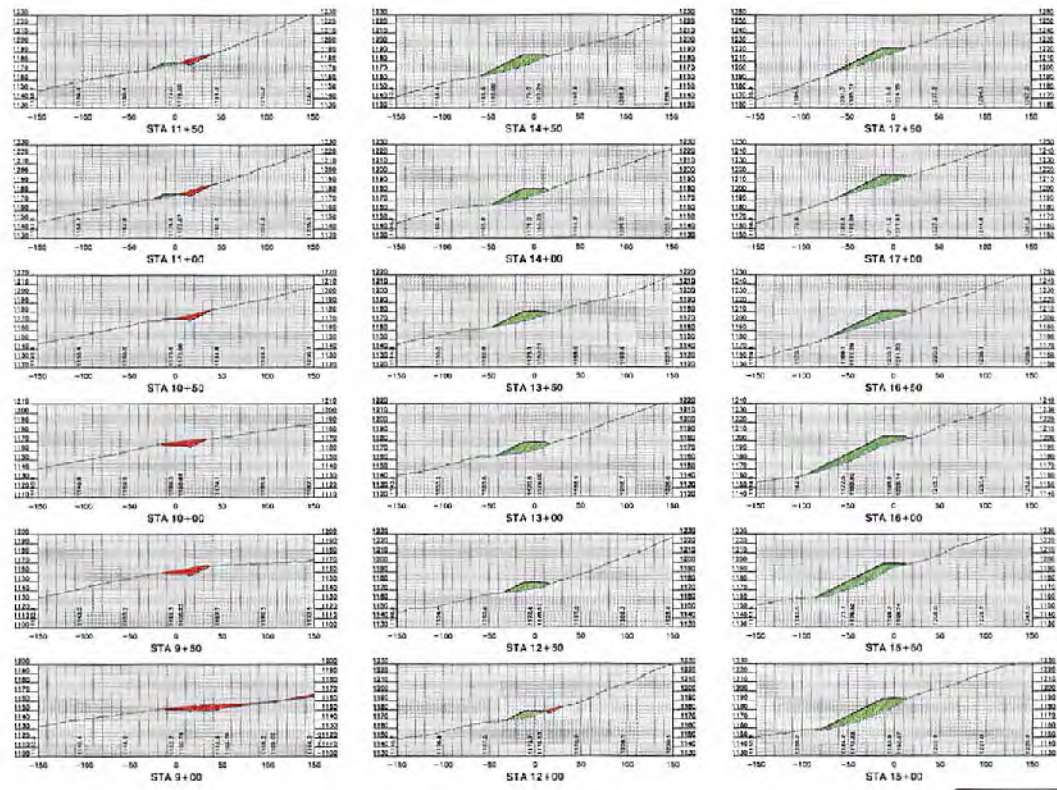
ACCESS ROAD SECTIONS

C601

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LEGEND
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 PROPOSED CUT

REVISION RECORD

NO.	DATE	DESCRIPTION

KEE
 Civil & Environmental Consultants, Inc.
 100 W. Englewood Ave. Suite 400 - Englewood, WV 26039
 Tel: 304.623.3119 Fax: 304.623.3041

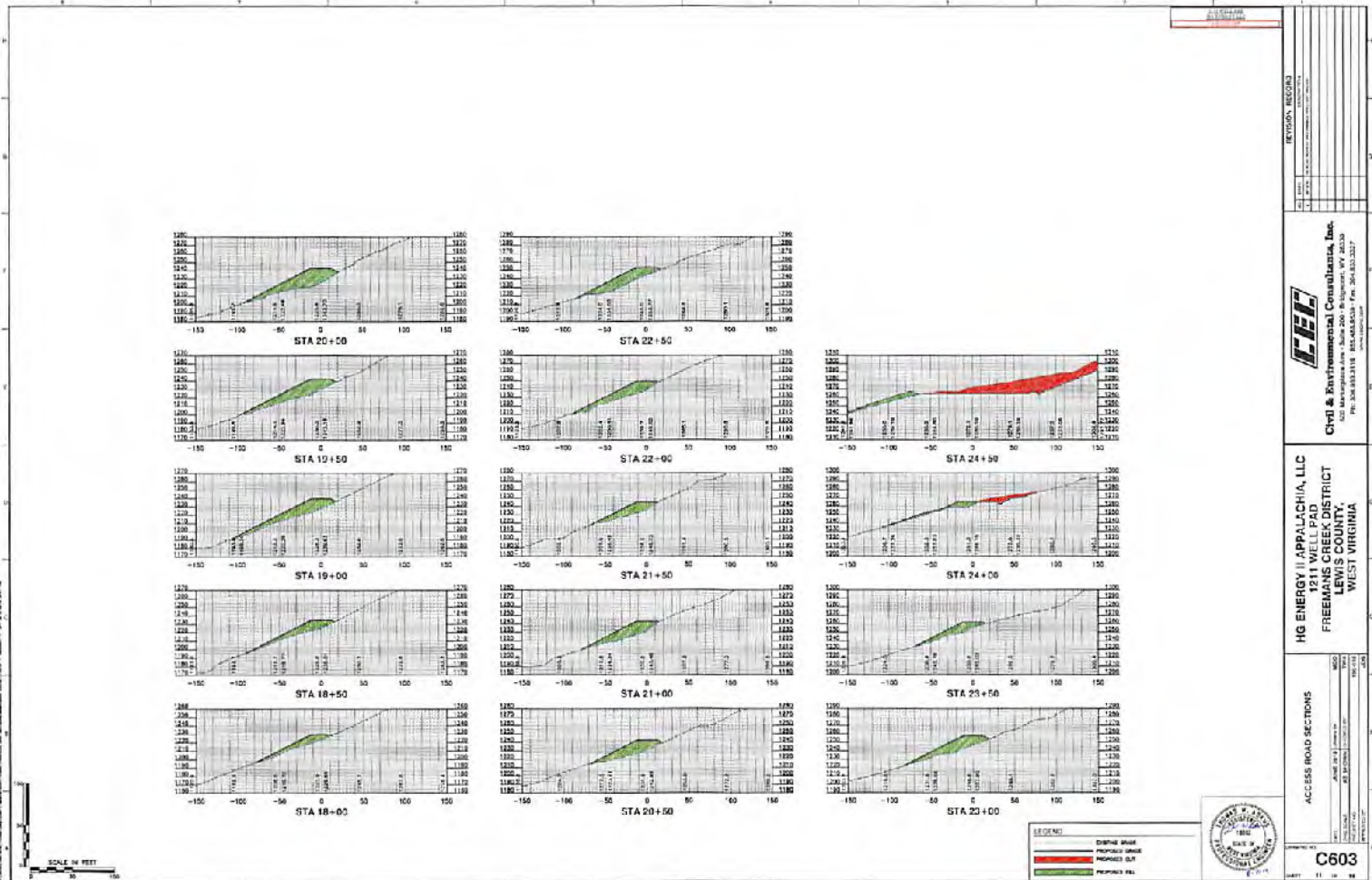
HG ENERGY II APPALACHIA, LLC
 1211 WELL PAD
 FREEMANS CREEK DISTRICT
 LEWIS COUNTY,
 WEST VIRGINIA

ACCESS ROAD SECTIONS

C602

SCALE IN FEET
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REVISION RECORD

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18	08/16/19	ISSUED FOR PERMITTING
19	08/16/19	ISSUED FOR PERMITTING
20	08/16/19	ISSUED FOR PERMITTING

CEC
Civil & Environmental Consultants, Inc.
102 Main Street - Suite 200 - Elgin, WV 25120
Ph: 304.833.1111 Fax: 304.833.2127
www.cecinc.com

HG ENERGY II APPALACHIA, LLC
1211 WELL PAD
FREEMANS CREEK DISTRICT
LEWIS COUNTY,
WEST VIRGINIA

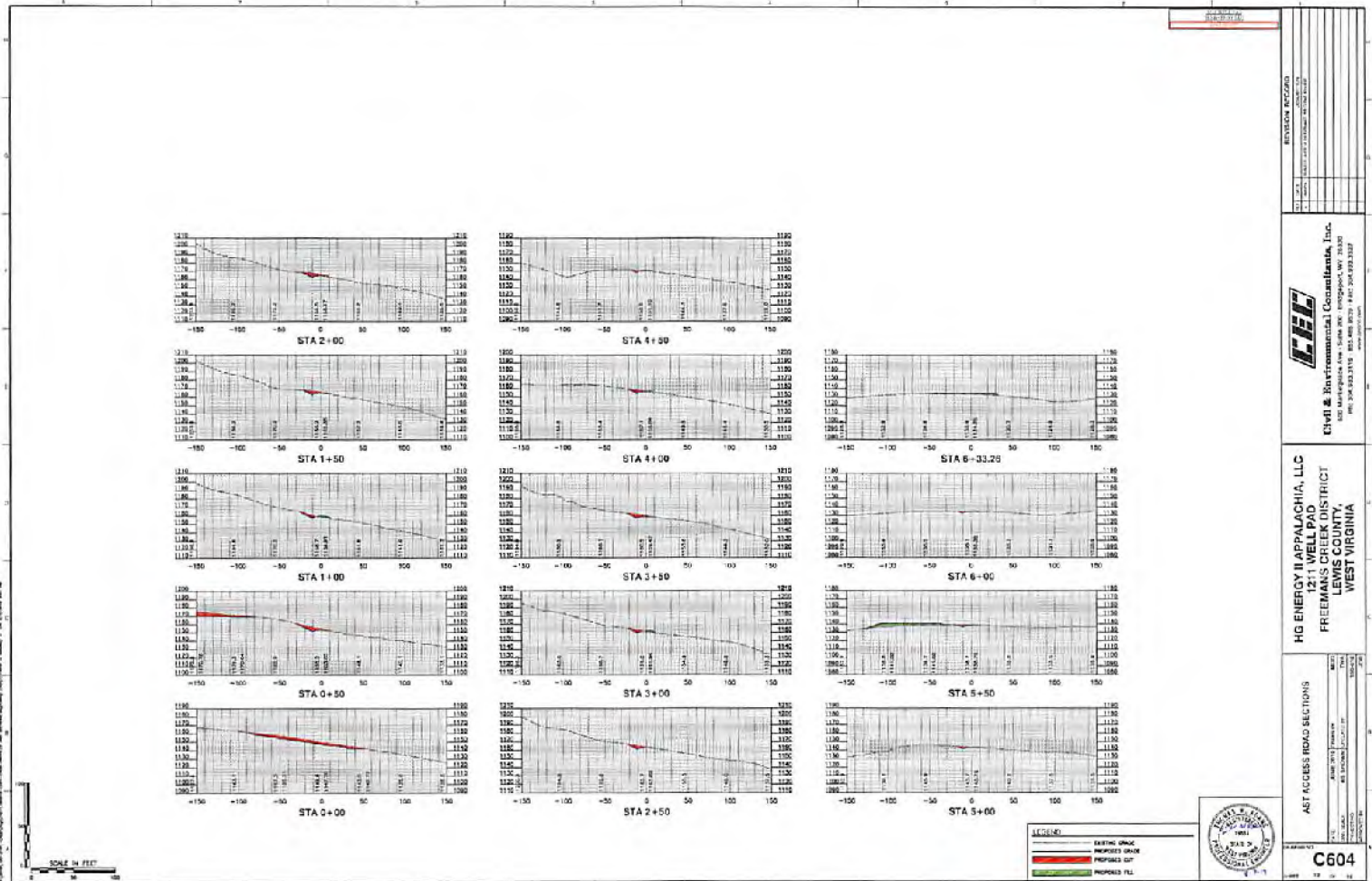
ACCESS ROAD SECTIONS
DATE: 08/16/19
SCALE: AS SHOWN
PROJECT: C603

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REVISIONS	
NO.	DESCRIPTION

EEC
 Civil & Environmental Consultants, Inc.
 100 Marquette Lane Suite 100 Morgantown, WV 26505
 304.241.2111 FAX 304.241.2122

HG ENERGY II APPALACHIA, LLC
 1211 WELL PAD
 FREEMANS COOKIN DISTRICT
 PUTNAM COUNTY
 WEST VIRGINIA

ASST ACCESS ROAD SECTIONS
 DATE: 08/16/19
 DRAWN BY: J. J. [unreadable]
 CHECKED BY: [unreadable]
C604

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0800
GENERAL NOTES
HO ENERGY II APPALACHIA, LLC
1211 WELL PAD
FIREMAINS CREEK DISTRICT
WEST VIRGINIA
CPEI & Environmental Consultants, Inc.
1000 University Ave., Ste 2000, Morgantown, WV 26506
PH: 304.293.1100 FAX: 304.293.1101



REPORT UNDER REVIEW
THIS REPORT IS BEING REVIEWED BY THE STATE OF WEST VIRGINIA. THE REVIEW IS LIMITED TO TECHNICAL ASPECTS OF THE REPORT AND DOES NOT CONSTITUTE AN ENDORSEMENT OR GUARANTEE OF THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE REVIEWER'S COMMENTS ARE FOR INFORMATIONAL PURPOSES ONLY AND DO NOT REPRESENT A FINAL DETERMINATION BY THE STATE OF WEST VIRGINIA.

1. **GENERAL INFORMATION**
The purpose of this report is to provide a detailed description of the geology and structure of the Firemaims Creek District, West Virginia. The report includes a description of the geology, structure, and hydrogeology of the district, as well as a discussion of the potential impacts of the proposed project on the district's geology and structure.

2. **DESCRIPTION OF THE DISTRICT**
The Firemaims Creek District is located in the northern part of West Virginia. It is bounded by the Kanawha River to the north and the Mingo River to the south. The district is primarily composed of the Kanawha and Mingo formations, which are part of the Carboniferous system. The Kanawha formation is a thick sequence of sandstone and shale, while the Mingo formation is a thinner sequence of sandstone and shale. The district is characterized by its complex geology, which includes numerous faults and folds.

3. **STRUCTURE AND TECTONICS**
The Firemaims Creek District is a tectonically active area. It is bounded by the Kanawha River to the north and the Mingo River to the south. The district is primarily composed of the Kanawha and Mingo formations, which are part of the Carboniferous system. The Kanawha formation is a thick sequence of sandstone and shale, while the Mingo formation is a thinner sequence of sandstone and shale. The district is characterized by its complex geology, which includes numerous faults and folds.

4. **HYDROGEOLOGY**
The Firemaims Creek District is a hydrogeologically complex area. It is bounded by the Kanawha River to the north and the Mingo River to the south. The district is primarily composed of the Kanawha and Mingo formations, which are part of the Carboniferous system. The Kanawha formation is a thick sequence of sandstone and shale, while the Mingo formation is a thinner sequence of sandstone and shale. The district is characterized by its complex geology, which includes numerous faults and folds.

5. **POTENTIAL IMPACTS**
The proposed project has the potential to impact the geology and structure of the Firemaims Creek District. The project involves the construction of a well pad and the drilling of a well. The well pad construction will require the removal of topsoil and the construction of a concrete pad. The drilling of the well will require the excavation of a shaft and the installation of a casing. The project may also result in the disturbance of the district's geology and structure.

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NOTE: CONTRACTOR IS TO PERFORM SOIL TESTING PRIOR TO SEEDING, MULCHING, AND FERTILIZING TO ENSURE GRASS GROWTH.

PLANTING DATE	SEEDING DATE	SEEDING METHOD
MARCH 1 - APRIL 15 (WINTER 1)	APRIL 15 - MAY 15 (WINTER 2)	SEEDING
MAY 16 - AUGUST 1	NOV 15 - FEBRUARY 15 (WINTER 3)	SEEDING
SEPTEMBER 1 - OCTOBER 1	NOV 15 - FEBRUARY 15 (WINTER 3)	SEEDING
NOVEMBER 1 - MARCH 1	NOV 15 - FEBRUARY 15 (WINTER 3)	SEEDING

SPICES	A (LBS/100)	B (LBS/100)	C (LBS/100)	D (LBS/100)	E (LBS/100)
GRAIN GRAIN GRAIN	40	30	20	10	10-20-20
SOIL GRAIN GRAIN	30	20	10	10	10-20-20
TEMPORARY COVER	10	10	10	10	10-20-20

SPECIES	SEEDING RATE (LBS/100)	SEEDING DATE	SEEDING METHOD	PH VALUE
ANNUAL PERENNIALS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5
FIELD HERBACEOUS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5
SPRING GRASS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5
WINTER GRASS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5
WINTER GRASS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5
WINTER GRASS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5
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WINTER GRASS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5
WINTER GRASS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5

NOTE: THESE RATES SHOULD BE INCREASED BY 50% IF PLANTED APRIL 15 - AUGUST 1 AND OCTOBER 1 - MARCH 1

PH OF SOIL	NO. OF TESTS	TESTS USEABLE
5.0 TO 5.5	2	2
5.5 TO 6.0	3	3
6.0 TO 6.5	4	4

NOTES:

- THE PH CAN BE DETERMINED WITH A PORTABLE PH TESTING KIT OR BY SEEDING THE SOIL SAMPLES TO A TESTING LABORATORY, WHICH A TONN OF LIME PER ACRE MAY BE APPLIED TO BE INCORPORATED INTO THE SOIL BY PLowing, BACKDRAINING, OR TROWING UP AND DOWN THE SOIL.
- CONTRACTOR IS TO PERFORM SOIL TESTING PRIOR TO SEEDING, MULCHING, AND FERTILIZING TO ENSURE GRASS GROWTH.

SPECIES/PLANT	SEEDING RATE (LBS/100)	SEEDING DATE	SEEDING METHOD	PH VALUE
PERENNIALS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5
PERENNIALS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5
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PERENNIALS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5

NOTE: MIXTURES LISTED IN BOLD ARE SUITABLE FOR USE IN SHADY WOODLAND SETTINGS; THOSE IN ITALICS ARE SUITABLE FOR USE IN FULL SUN SETTINGS.

NOTE: FOR UNPREPARED SEEDINGS OR SEEDING OUTSIDE THE OPTIMUM TIMEFRAME, ADD 50% MORE SEED TO THE SPECIFIED RATE.

* LANTHOS FLAVIDA IS POTENTIALLY POISONOUS TO SOME LIVESTOCK. ALL LIVESTOCK SHOULD BE KEPT AWAY FROM PLANTED AREAS PRIOR TO SEEDING.

† DENOTES BROADWAY MIX.

SPECIES/PLANT	SEEDING RATE (LBS/100)	SEEDING DATE	SEEDING METHOD	PH VALUE
PERENNIALS	40	APR 15 - MAY 15 OR SEP 15 - OCT 15	WELL - PLOW	5.5 - 7.5
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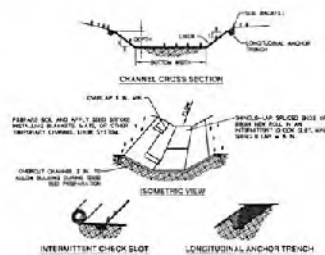
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† DENOTES BROADWAY MIX.

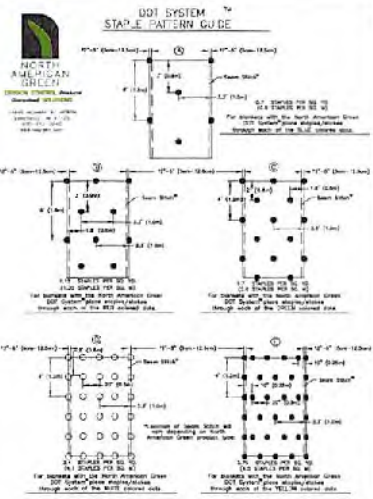
DETAIL 1
SITE STABILIZATION

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 LEWIS COUNTY, WEST VIRGINIA
 H3 ENERGY II APPALACHIA, LLC
 1211 WELL PAD
 ILLINOIS ENERGY SERVICES, INC.
 1000 WASHINGTON AVE - SUITE 400 - HUNTSVILLE, TN 37401
 TEL: 615.875.3311 FAX: 615.875.3311

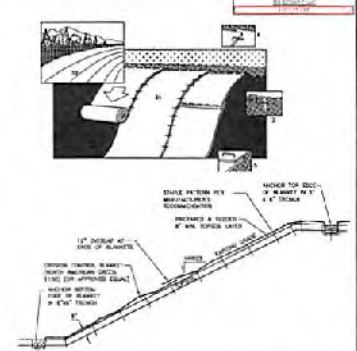
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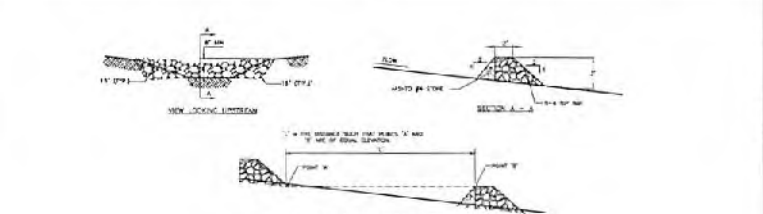
- NOTES:**
1. REFER TO DETAIL 1 FOR SECTION WITH AND WITHOUT INTERMITTENT CHECK SLOTS. THIS OF CHANNEL WHERE FLOW AND SLOPE ARE EQUAL. CHECK SLOTS SHALL BE INSTALLED AT 10' INTERVALS AND SHALL BE REMOVED BEFORE COMPLETION OF CHANNEL. CHECK SLOTS SHALL BE 1" WIDE AND 1" DEEP. THE SPACING OF CHECK SLOTS SHALL BE 10' UNLESS OTHERWISE SPECIFIED.
 2. INTERMITTENT CHECK SLOTS SHALL BE INSTALLED AT 10' INTERVALS AND SHALL BE REMOVED BEFORE COMPLETION OF CHANNEL. CHECK SLOTS SHALL BE 1" WIDE AND 1" DEEP. THE SPACING OF CHECK SLOTS SHALL BE 10' UNLESS OTHERWISE SPECIFIED.
 3. LONGITUDINAL ANCHOR TRENCHES SHALL BE INSTALLED AT 10' INTERVALS AND SHALL BE REMOVED BEFORE COMPLETION OF CHANNEL. ANCHOR TRENCHES SHALL BE 1" WIDE AND 1" DEEP. THE SPACING OF ANCHOR TRENCHES SHALL BE 10' UNLESS OTHERWISE SPECIFIED.
 4. CHANNEL CROSS SECTION SHALL BE INSTALLED AS SHOWN IN DETAIL 1. CHANNEL CROSS SECTION SHALL BE 10' WIDE AND 1' DEEP. THE SPACING OF CHANNEL CROSS SECTIONS SHALL BE 10' UNLESS OTHERWISE SPECIFIED.
 5. CHANNEL CROSS SECTION SHALL BE INSTALLED AS SHOWN IN DETAIL 1. CHANNEL CROSS SECTION SHALL BE 10' WIDE AND 1' DEEP. THE SPACING OF CHANNEL CROSS SECTIONS SHALL BE 10' UNLESS OTHERWISE SPECIFIED.
 6. CHANNEL CROSS SECTION SHALL BE INSTALLED AS SHOWN IN DETAIL 1. CHANNEL CROSS SECTION SHALL BE 10' WIDE AND 1' DEEP. THE SPACING OF CHANNEL CROSS SECTIONS SHALL BE 10' UNLESS OTHERWISE SPECIFIED.
 7. CHANNEL CROSS SECTION SHALL BE INSTALLED AS SHOWN IN DETAIL 1. CHANNEL CROSS SECTION SHALL BE 10' WIDE AND 1' DEEP. THE SPACING OF CHANNEL CROSS SECTIONS SHALL BE 10' UNLESS OTHERWISE SPECIFIED.
 8. CHANNEL CROSS SECTION SHALL BE INSTALLED AS SHOWN IN DETAIL 1. CHANNEL CROSS SECTION SHALL BE 10' WIDE AND 1' DEEP. THE SPACING OF CHANNEL CROSS SECTIONS SHALL BE 10' UNLESS OTHERWISE SPECIFIED.
 9. CHANNEL CROSS SECTION SHALL BE INSTALLED AS SHOWN IN DETAIL 1. CHANNEL CROSS SECTION SHALL BE 10' WIDE AND 1' DEEP. THE SPACING OF CHANNEL CROSS SECTIONS SHALL BE 10' UNLESS OTHERWISE SPECIFIED.
 10. CHANNEL CROSS SECTION SHALL BE INSTALLED AS SHOWN IN DETAIL 1. CHANNEL CROSS SECTION SHALL BE 10' WIDE AND 1' DEEP. THE SPACING OF CHANNEL CROSS SECTIONS SHALL BE 10' UNLESS OTHERWISE SPECIFIED.



DETAIL 3
EROSION CONTROL BLANKET STAPLE PATTERN
NOT TO SCALE



DETAIL 4
EROSION CONTROL BLANKET
NOT TO SCALE



DETAIL 5
ROCK CHECK DAM
NOT TO SCALE

REVISION RECORD

NO.	DATE	DESCRIPTION

CEL

CEL & Environmental Consultants, Inc.
1400 Montgomery Ave., Suite 100, P.O. Box 11330
Ft. Worth, TX 76101-1330
Tel: 817.333.1111 Fax: 817.333.1127

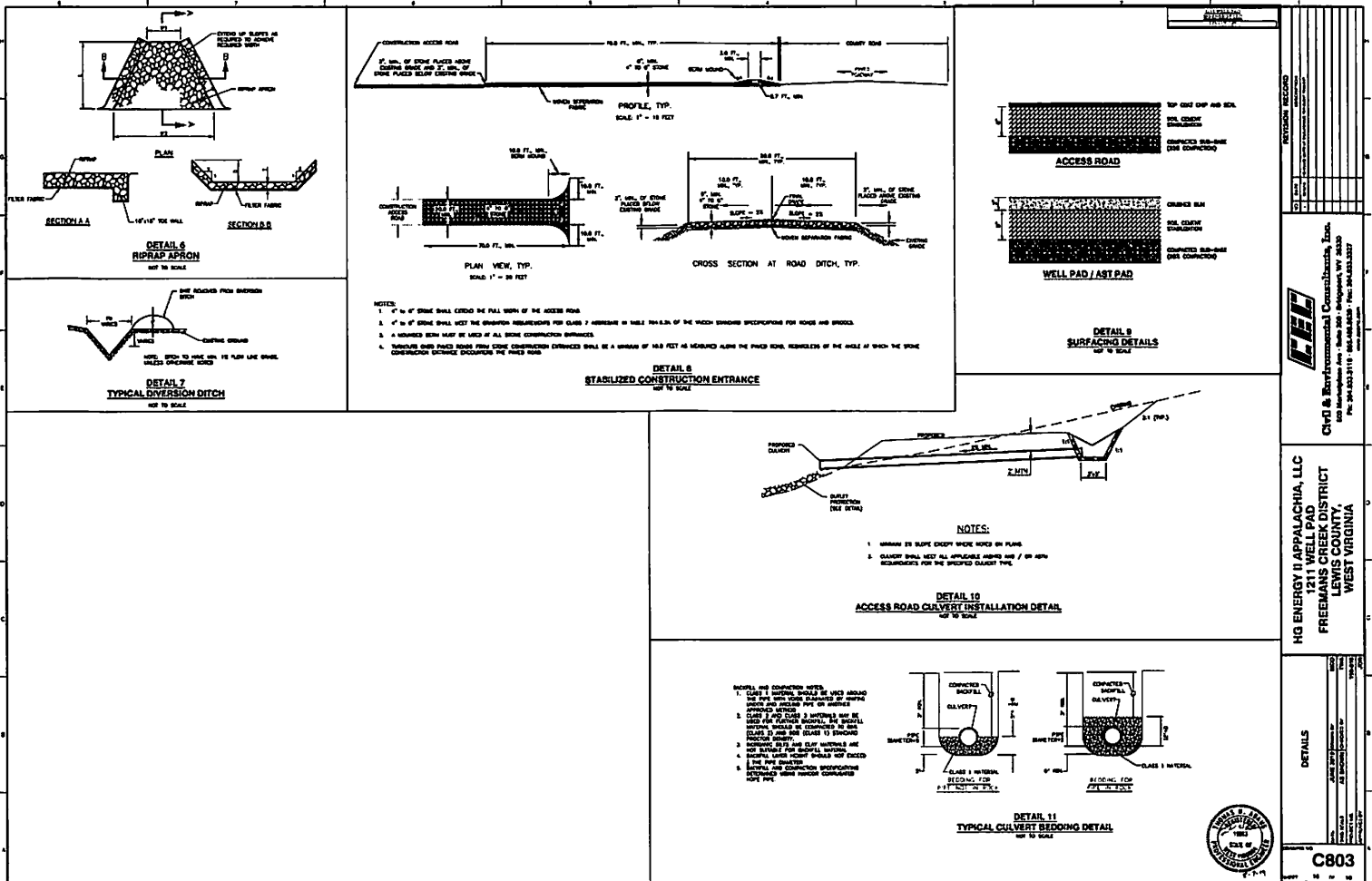
H2 ENERGY II APPALACHIA, LLC
1211 WELL PAD
FREEMAN CREEK DISTRICT
LEWIS COUNTY,
WEST VIRGINIA

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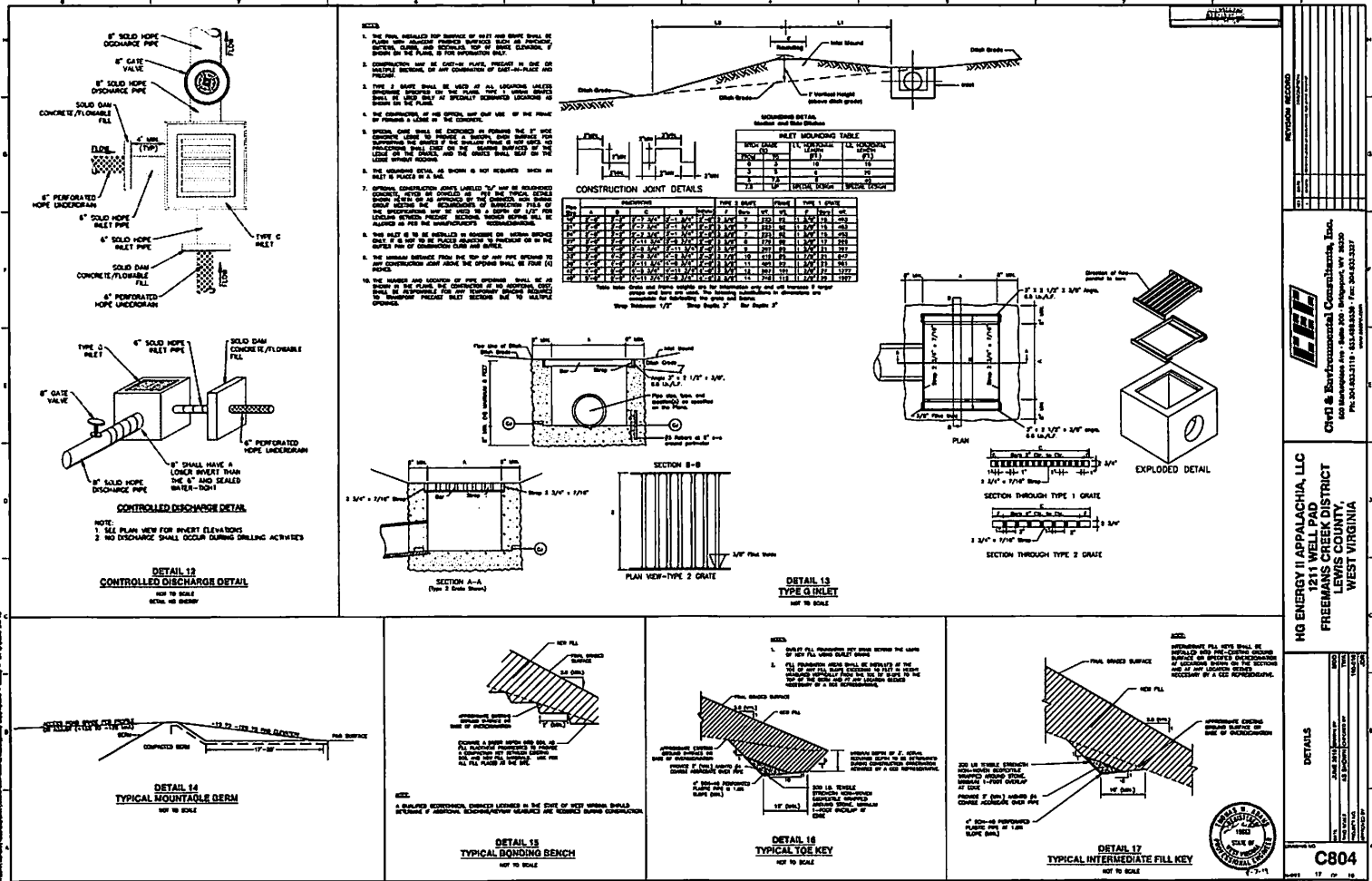
CEC
Civil & Environmental Consultants, Inc.
100 Montgomery Ave. • Suite 100 • Arlington, VA 22204
Tel: 703.252.1110 • Fax: 703.252.1227
www.cec.com

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LEWIS COUNTY,
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HO ENERGY II APPALACHIA, LLC
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REVISION RECORD

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49	08/16/2010	ISSUED FOR PERMIT
50	08/16/2010	ISSUED FOR PERMIT

SCALE: NOT TO SCALE

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

1) Well Operator: HG Energy II Appalachia, L.P. 494519932 Lewis Freeman West Milford 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: McDonald 1211 N-5H Well Pad Name: McDonald 1211

3) Farm Name/Surface Owner: McDonald Public Road Access: SR 19

4) Elevation, current ground: 1280' Elevation, proposed post-construction: 1264.5'

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

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 6753'/6835' and 82' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6800'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 22,692' ✓

11) Proposed Horizontal Leg Length: 15,348'

12) Approximate Fresh Water Strata Depths: 34', 107', 205', 229', 249'

13) Method to Determine Fresh Water Depths: Nearest offset well data, (47-041-5128, 3938, 4929)

14) Approximate Saltwater Depths: 1299', 1675'

15) Approximate Coal Seam Depths: 810' to 815'


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

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

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

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18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	New	LS	157.5	120'	120' ✓	Drilled In
Fresh Water/Coal	20"	NEW	J-55	94	1000'	1000' ✓	CTS
Intermediate 1	13 3/8"	NEW	J-55 BTC	68	2040'	2040' ✓	CTS
Intermediate 2	9 5/8"	NEW	J-55 BTC	40	2750'	2750' ✓	CTS
Production	5 1/2"	NEW	P-110 HP	23	22692'	22692' ✓	CTS
Tubing							
Liners							

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	30"	.500				Drilled In
Fresh Water/Coal	20"	26"	.438	2110	1200	Type 1, Class A	40 % excess yield = 1.20, CTS
Intermediate 1	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	Lead 40% excess, Tail 0% excess
Intermediate 2	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	Lead 40% excess, Tail 0% Excess
Production	5 1/2"	8 1/2"	.415	16240	12000	Type 1/Class A	20% excess yield = 1.19, tail yield 1.94
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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WW-6B
(10/14)

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Office of Oil and Gas API NO. 47-

OPERATOR WELL NO. McDonald 1211 N-5H
Well Pad Name: McDonald 1211

OCT 15 2019

WV Department of
Environmental Protection

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

Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6800 feet. Drill horizontal leg to estimated 15,348 lateral length, 22,692 TMD. Hydraulically fracture stimulate and be capable of producing from the Marcellus Formation. Should we encounter an unanticipated void in the coal, we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface. We plan to run an ECP above the Gantz/Dominion Storage interval to aid in sealing off and isolating the storage interval.

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

The stimulation will be completed with multiple stages divided over the lateral length of the well. Stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand, water, and chemicals. See attached list. Maximum pressure not to exceed 12,500 psi.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 22.75 acres

22) Area to be disturbed for well pad only, less access road (acres): 7.31 acres

23) Describe centralizer placement for each casing string:

No centralizers will be used with conductor casing.
Freshwater/Coal - centralize every 3 joints to surface.
Intermediate 1 - Bow Spring on every joint, will also be running ACP for isolating storage zone
Intermediate 2 - Bow Spring on first 2 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.

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

Conductor - N/A, Casing to be drilled in w/ Dual Rotary Rig.
Fresh Water/Coal - 15.0 ppg PNE-1 + 3% bwoc CaCl₂ 40% Excess Yield = 1.20, CTS
Intermediate 1 - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl₂ 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl₂ zero% Excess, CTS
Intermediate 2 - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl₂ 40% Excess, Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl₂ zero% Excess, CTS
Production - Lead: 14.5 ppg POZ-PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170, Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess, Lead Yield=1.19, Tail Yield=1.94, CTS

25) Proposed borehole conditioning procedures:

Conductor - Ensure the hole is clean at TD.
Fresh Water/Coal - Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.
Intermediate 1 - Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.
Intermediate 2 - 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.

*Note: Attach additional sheets as needed.

McDonald 1211 Well Pad (N-1H to N-5H, S-6H to S-10H)
Cement Additives

Material Name	Material Type	Material Description	CAS #																		
Premium NE-1	Portland Cement	Premium NE-1 is a portland cement with early compressive strength properties.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Portland cement</td> <td>90 - 100</td> <td>65997-15-1</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> <tr> <td>Magnesium oxide</td> <td>1 - 5</td> <td>1309-48-4</td> </tr> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>0.1 - 1</td> <td>14808-60-7</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Portland cement	90 - 100	65997-15-1	Calcium oxide	1 - 5	1305-78-8	Magnesium oxide	1 - 5	1309-48-4	Crystalline silica: Quartz (SiO2)	0.1 - 1	14808-60-7			
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Crystalline silica: Quartz (SiO2)	0.1 - 1	14808-60-7																			
Bentonite	Extender	Commonly called gel, it is a clay material used as a cement extender and to control excessive free water.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>bentonite</td> <td>90 - 100</td> <td>1302-78-9</td> </tr> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	bentonite	90 - 100	1302-78-9	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7									
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Calcium Chloride	Accelerator	A powdered, flaked or pelletized material used to decrease thickening time and increase the rate of strength development.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Calcium chloride</td> <td>90 - 100</td> <td>10043-52-4</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Calcium chloride	90 - 100	10043-52-4												
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Cello Flake	Lost Circulation	Graded (3/8 to 3/4 inch) cellophane flakes used as a lost circulation material.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table>	Ingredient name	%	CAS number	No hazardous ingredient														
			Ingredient name	%	CAS number																
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FP-13L	Foam Preventer	FP-13L is a clear liquid organic phosphate antifoaming agent used in cementing operations. It is very effective minimizing air entrapment and preventing foaming tendencies of latex systems.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Tributyl phosphate</td> <td>90 - 100</td> <td>126-73-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Tributyl phosphate	90 - 100	126-73-8												
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Tributyl phosphate	90 - 100	126-73-8																			
Granulated Sugar	Retarder	Used to retard cement returns at surface. A proprietary product that provides expansive properties and improves bonding at low to moderate temperatures.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Sucrose</td> <td>90 - 100</td> <td>57-50-1</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Sucrose	90 - 100	57-50-1												
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EC-1			<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Calcium magnesium oxide</td> <td>90 - 100</td> <td>37247-91-9</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Calcium magnesium oxide	90 - 100	37247-91-9												
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MPA-170	Gas Migration	Multi-purpose polymer additive used to control free fluid, fluid loss, rheology, and gas migration.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>No hazardous ingredient</td> <td></td> <td></td> </tr> </tbody> </table>	Ingredient name	%	CAS number	No hazardous ingredient														
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Poz (Fly Ash)	Base	A synthetic pozzolan, (primarily Silicon Dioxide). When blended with cement, Pozzolan can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Crystalline silica: Quartz (SiO2)</td> <td>5 - 10</td> <td>14808-60-7</td> </tr> <tr> <td>Calcium oxide</td> <td>1 - 5</td> <td>1305-78-8</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7	Calcium oxide	1 - 5	1305-78-8									
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R-3	Retarder	A low temperature retarder used in a wide range of slurry formulations to extend the slurry thickening time.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>Organic acid salt</td> <td>40 - 50</td> <td>Trade secret.</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	Organic acid salt	40 - 50	Trade secret.												
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S-5	Surfactant	Used to water wet casing and formation to facilitate cement bonding.	<table border="1"> <thead> <tr> <th>Ingredient name</th> <th>%</th> <th>CAS number</th> </tr> </thead> <tbody> <tr> <td>2-Butoxyethanol</td> <td>20 - 30</td> <td>111-76-2</td> </tr> <tr> <td>Proprietary surfactant</td> <td>10 - 20</td> <td>Trade secret.</td> </tr> <tr> <td>D-Glucopyranose, oligomeric, C10-16-alkyl glycosides</td> <td>5 - 10</td> <td>110615-47-9</td> </tr> <tr> <td>Alkylarylsulfonate amine salt</td> <td>1 - 5</td> <td>Trade secret.</td> </tr> <tr> <td>Polyoxyalkylenes</td> <td>0.1 - 1</td> <td>Trade secret.</td> </tr> </tbody> </table>	Ingredient name	%	CAS number	2-Butoxyethanol	20 - 30	111-76-2	Proprietary surfactant	10 - 20	Trade secret.	D-Glucopyranose, oligomeric, C10-16-alkyl glycosides	5 - 10	110615-47-9	Alkylarylsulfonate amine salt	1 - 5	Trade secret.	Polyoxyalkylenes	0.1 - 1	Trade secret.
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WV Department of Environmental Protection

List of Frac Additives by Chemical Name and CAS #**McDonald 1211 Well Pad (N-1H to N-5H, S-6H to S-10H)**

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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WV Department of
Environmental Protection

Diane White

From: Adkins, Laura L <Laura.L.Adkins@wv.gov>
Sent: Wednesday, August 7, 2019 9:37 AM
To: Diane White
Subject: RE: [External] FW: [External] McDonald 1211 Well Permit Applications

Yes, I apologize for not getting back to you. I'm good with it. :)

From: Diane White <dwhite@hgenergyllc.com>
Sent: Tuesday, August 6, 2019 3:22 PM
To: Adkins, Laura L <Laura.L.Adkins@wv.gov>
Subject: [External] FW: [External] McDonald 1211 Well Permit Applications

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and are expecting the content. -- WV Office of Technology

Laura,
 I'm sorry to bother you again.
 I've scheduled a meeting with Barry Stollings on Thursday morning to walk the 1211 site and go over the drilling permit application, including the WW-6B and the casing schematic.
 Have you by chance, had an opportunity to review the 1211 casing schematic?
 Please let me know if I can get you any other information for your review.
 Thanks,
 Diane

From: Diane White <dwhite@hgenergyllc.com>
Sent: Friday, August 2, 2019 4:50 PM
To: Adkins, Laura L <Laura.L.Adkins@wv.gov>
Subject: RE: [External] McDonald 1211 Well Permit Applications

Laura,
 Yes, see the attached casing schematic. The fresh water is at 205' and the coal is at 924', so we wanted to run the FW casing to 1000' to close off the coal. I know that normally there's the regulation about the FW casing only extending 100' to 150' below the water. That's why I wanted to talk with you about it prior to submitting the applications.
 Let me know what other information you need, and thanks,
 Diane

From: Adkins, Laura L <Laura.L.Adkins@wv.gov>
Sent: Friday, August 2, 2019 4:27 PM
To: Diane White <dwhite@hgenergyllc.com>
Subject: RE: [External] McDonald 1211 Well Permit Applications

Diane,

It depends on where the freshwater and coal depths are, can you tell me where the fw and coal are and how far you want to run the casing?

From: Diane White <dwhite@hgenergyllc.com>
Sent: Friday, August 2, 2019 3:22 PM
To: Adkins, Laura L <Laura.L.Adkins@wv.gov>
Subject: [External] McDonald 1211 Well Permit Applications

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and are expecting the content. -- WV Office of Technology

Laura,

Good afternoon. I'm beginning to work on HG's 1211 well work applications. This pad is in close proximity to the 1209 and 1210 well pads. We anticipate drilling conditions will be similar. Because of this, we'd like to submit the WW-6B's with the fresh water casing extending 76 feet below the coal seam.

Can you review this request and approve? Or do I need to submit something more formal with the permit application? I'm hoping to meet with Barry Stollings next week to review one of the well work applications.

Please advise, and thank you,
Diane

Diane C. White



HG Energy, LLC
5260 Dupont Road
Parkersburg, WV 26101
304-420-1119 (O)
304-482-0108 (C)
dwhite@hgenergyllc.com

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AUG 16 2019

WV Department of
Environmental Protection



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

September 17, 2019

Ms. Laura Adkins
WVDEP
Division of Oil & Gas
601 57th Street
Charleston, West Virginia 25304

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Office of Oil and Gas

OCT 15 2019

WV Department of
Environmental Protection

RE: McDonald 1211 N-5H Permit Revision – (47-041-05701)
Union District, Harrison County
West Virginia

Dear Ms. Adkins:

Per our discussions, enclosed are revised forms (survey plat, mylar, WW-6B, casing schematic and WW6A-1) for the McDonald 1211 N-5H well work pending application.

Based on production data for nearby producing wells in this field; the drilling/engineered plans are being revised to allow for greater distance between the laterals, (increased to 1500' from 1000'). The surface location of the well won't move, the only change to the well being modified is the lateral spacing being requested which impacts the TMD and lateral horizontal leg.

Please let me know if you have any questions or require additional information. I can be reached at (304) 420-1119 or dwhite@hgenergyllc.com.

Very truly yours,

Diane White

Diane C. White

Enclosures

cc: Sam Ward – Inspector

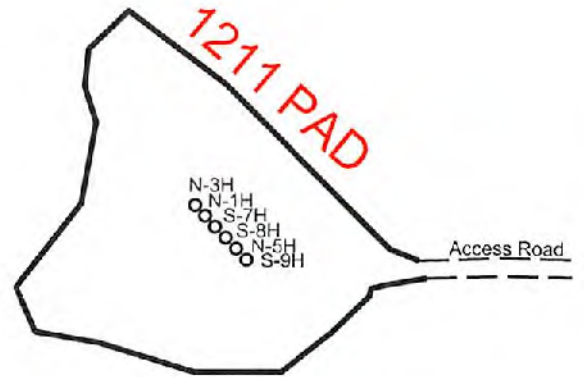
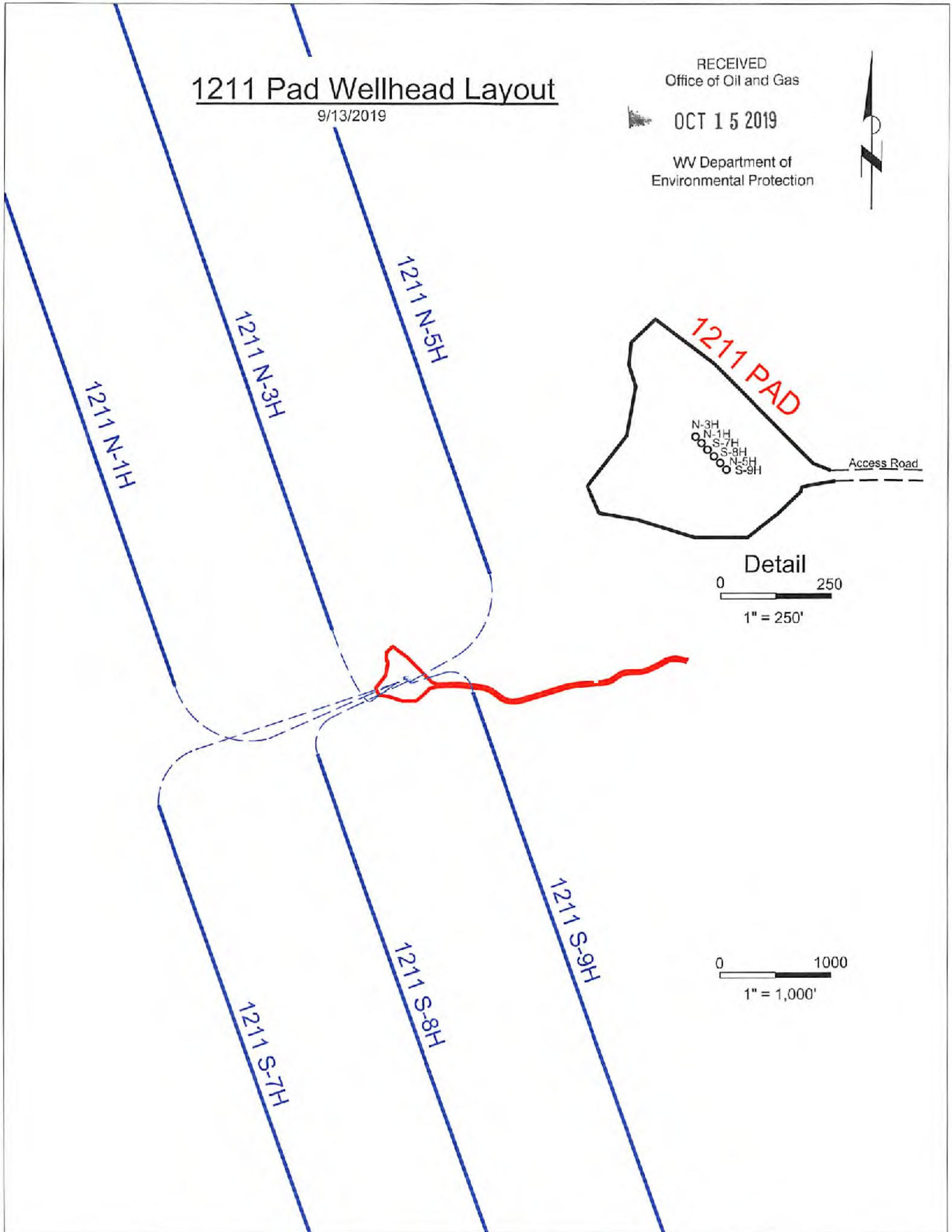
1211 Pad Wellhead Layout

9/13/2019

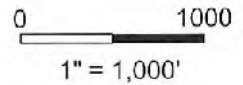
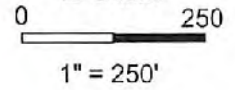
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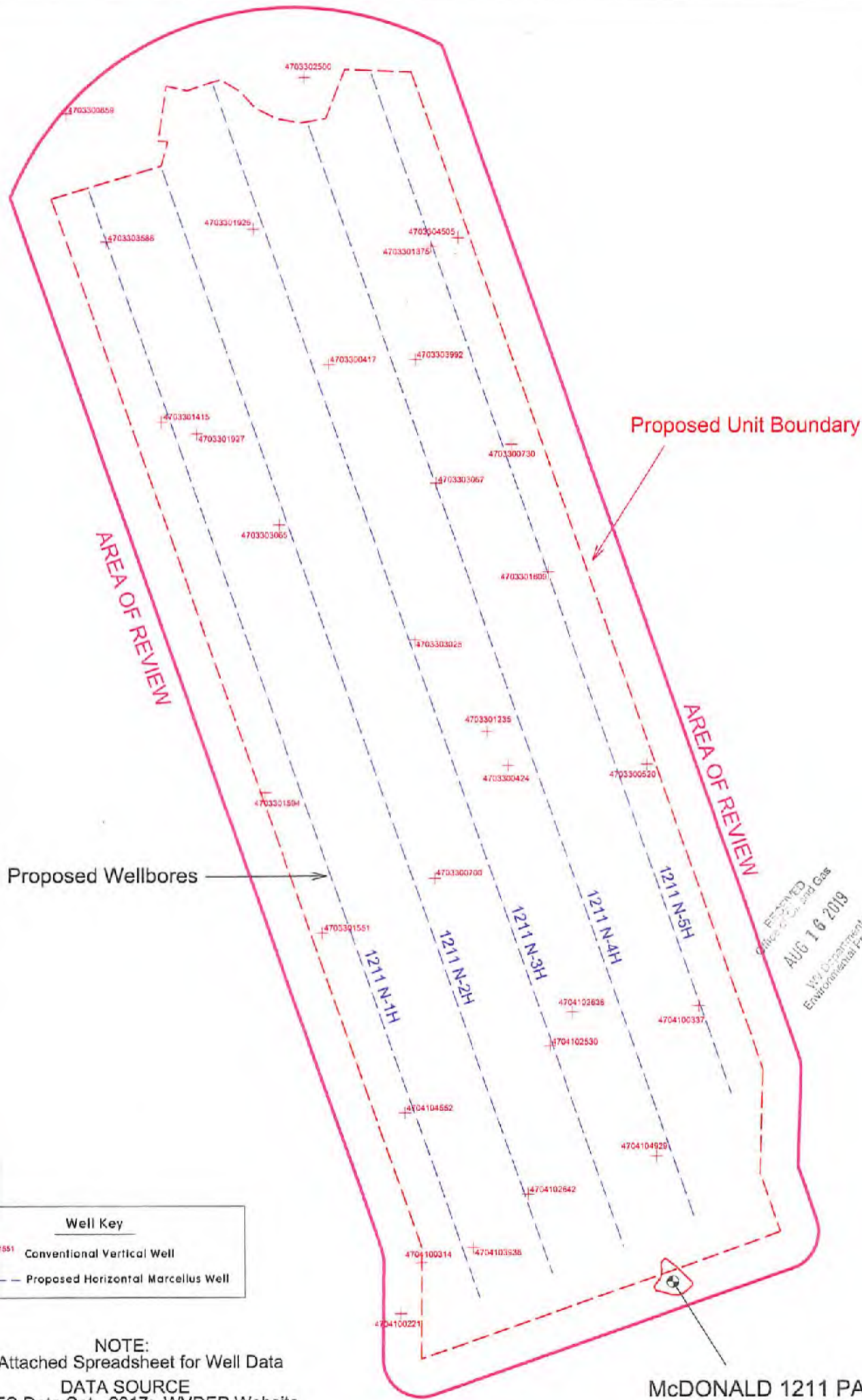
OCT 15 2019

WV Department of
Environmental Protection



Detail





Well Key	
	Conventional Vertical Well
	Proposed Horizontal Marcellus Well

NOTE:
See Attached Spreadsheet for Well Data
DATA SOURCE
WVGES Data Set - 2017; WVDEP Website

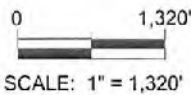
Area of Review for:

McDONALD 1211 PAD

Proposed 1211 N-1H Proposed 1211 N-2H
Proposed 1211 N-3H Proposed 1211 N-4H
Proposed 1211 N-5H

Freeman's Creek District, Lewis County, W.Va.
& Union District, Harrison County, W.Va.

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



EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:

McDONALD 1211 NORTH UNIT AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H & N-5H

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4703300417	Harrison	Jeff Ashcraft	Dominion Energy Transmission, Inc.	Benson	Gas	4500	ACTIVE	39.165811	-80.489914
2	4703300424	Harrison	W R Neely 1	Dominion Energy Transmission, Inc.	Hampshire Grp	Gas	2313	PLUGGED	39.152477	-80.481783
3	4703300520	Harrison	John C. Holden	Dominion Energy Transmission, Inc.	Benson	Gas	4548	ACTIVE	39.152497	-80.475371
4	4703300700	Harrison	A W Davis	Dominion Energy Transmission, Inc.	Benson	Gas	4370	ACTIVE	39.148430	-80.485215
5	4703300730	Harrison	Charles Lee Gray	Clowser Well Service, Inc.	Greenland Gap Fm	Gas	4600	ABANDONED	39.163923	-80.481492
6	4703300859	Harrison	Jesse B Knight	Dominion Energy Transmission, Inc.	Balltown	Gas	3948	ACTIVE	39.175834	-80.501963
7	4703301235	Harrison	Neely & Jackson	Dominion Energy Transmission, Inc.	Benson	Gas	4569	ACTIVE	39.153706	-80.482742
8	4703301375	Harrison	B Thrash	Dominion Energy Transmission, Inc.	Fifth	Gas	2490	ACTIVE	39.171006	-80.485142
9	4703301415	Harrison	D M Cole	Dominion Energy Transmission, Inc.	Bayard	Gas	2610	ACTIVE	39.164807	-80.497666
10	4703301551	Harrison	M Robinson	Dominion Energy Transmission, Inc.	Not Available	Storage	-	ACTIVE	39.146522	-80.490438
11	4703301594	Harrison	Donna Lee Davis	Dominion Energy Transmission, Inc.	Alexander	Gas	5025	ACTIVE	39.151573	-80.493012
12	4703301609	Harrison	Joe Perry	Dominion Energy Transmission, Inc.	Alexander	Gas	5024	ACTIVE	39.159365	-80.479840
13	4703301926	Harrison	Ernest A Rider	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4727	ACTIVE	39.171679	-80.493348
14	4703301927	Harrison	D M Cole	Dominion Energy Transmission, Inc.	Benson	Gas	4800	ACTIVE	39.164380	-80.496032
15	4703302500	Harrison	Arden Daughtery	Greylock Conventional, LLC	Greenland Gap Fm	Gas	4832	ACTIVE	39.177100	-80.490940
16	4703303025	Harrison	John Garrett 1	Dominion Energy Transmission, Inc.	Benson	Gas	4659	ACTIVE	39.156994	-80.486045
17	4703303065	Harrison	J Ashcraft	Dominion Energy Transmission, Inc.	Gantz	Storage	2236	PLUGGED	39.161097	-80.492248
18	4703303067	Harrison	R C McDonald	Dominion Energy Transmission, Inc.	Not Available	Not Available	-	PLUGGED	39.162549	-80.484982
19	4703303588	Harrison	G Dickinson etal 1	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4800	ACTIVE	39.171255	-80.500154
20	4703303992	Harrison	B F Thrash 2	Waco Oil & Gas Co., Inc.	Big Injun	Oil and Gas	-	ACTIVE	39.166966	-80.485898
21	4703304505	Harrison	Betty L Stephenson	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4977	ACTIVE	39.171322	-80.483894
22	4704100221	Lewis	F L Post 2	Dominion Energy Transmission, Inc.	Gantz	Storage	1970	ACTIVE	39.132930	-80.486946
23	4704100314	Lewis	F L Post	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	2397	ACTIVE	39.134769	-80.485998
24	4704100314	Lewis	F L Post	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	2397	ACTIVE	39.134769	-80.485998
25	4704100337	Lewis	Guinn Minter 1	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	2284	ACTIVE	39.143845	-80.473046
26	4704102530	Lewis	Robert Gene Burnside	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4465	ACTIVE	39.142465	-80.479953
27	4704102638	Lewis	L W Davis	Dominion Energy Transmission, Inc.	Not Available	Not Available	-	ACTIVE	39.143653	-80.478908
28	4704102642	Lewis	J L Post	Dominion Energy Transmission, Inc.	Not Available	Not Available	-	ACTIVE	39.137167	-80.481036
29	4704103938	Lewis	Robert Brincefield	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4402	ACTIVE	39.135302	-80.483575
30	4704103938	Lewis	Robert Brincefield	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4402	ACTIVE	39.13442	-80.485331
31	4704104552	Lewis	Robert E Brincefield	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4677	ACTIVE	39.140103	-80.486672
32	4704104929	Lewis	Robert Brincefield	Dominion Energy Transmission, Inc.	Misc Sands-BNSN/BRLR	Gas	4606	ACTIVE	39.138488	-80.475080
33	4704104939	Lewis	Robert/Terry Brincefield	Dominion Energy Transmission, Inc.	Misc Sands-BNSN/BRLR	Gas	4658	ACTIVE	39.130854	-80.478988

SOURCE: WVGES DATASET (2017) and WVDEP WEBSITE AND FIELD SURVEYS

YELLOW DENOTES WELL WITH TVD > 4,500'

GREEN DENOTES SURVEYED WELLS

Office of Oil and Gas Regulation
 RECEIVED
 AUG 16 2019

4704 05701



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

4704 * 05701

August 5, 2019

Waco Oil and Gas Company
1595 US Highway 33 E
Glenville, WV 26351

RE: Area of Review – McDonald 1211 Well Pad (N-1H to N-5H)
Hydraulic Fracturing Notice

Dear Sir:

HG Energy II Appalachia, I.L.C. has developed a Marcellus pad (McDonald 1211 pad) located in Lewis County, WV. As an owner or operator of a conventional natural gas well in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 7050' TVD) and existing conventional natural gas wells.

HG Energy anticipates conducting hydraulic fracturing of the Nutter 1208 Pad during the fourth quarter of 2019. We have identified conventional natural gas wells operated by your company within 500' of one of the newly planned laterals (Nutter 1208 N-1H). A plat for the well is attached.

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

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

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

Sincerely,

Diane White

Enclosure

RECEIVED
Office of Oil and Gas
AUG 16 2019
WV Department of
Environmental Protection



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

4704 05701

August 5, 2019

Greylock Conventional, LLC
500 Corporate Landing
Charleston, WV 25304

RE: Area of Review – McDonald 1211 Well Pad (N-1H to N-5H)
Hydraulic Fracturing Notice

Dear Sir:

HG Energy II Appalachia, LLC, has developed a Marcellus pad (McDonald 1211 pad) located in Lewis County, WV. As an owner or operator of a conventional natural gas well in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 7050' TVD) and existing conventional natural gas wells.

HG Energy anticipates conducting hydraulic fracturing of the Nutter 1208 Pad during the fourth quarter of 2019. We have identified conventional natural gas wells operated by your company within 500' of one of the newly planned laterals (Nutter 1208 N-1H). A plat for the well is attached.

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

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

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

Sincerely,

Diane White

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

4704 05701

August 5, 2019

Clowser Well Service, Inc
805 Charlie Brown Road
Salem, WV 26426

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

August 5, 2019

Dominion Energy Transmission
Attn: Charles Cunningham
2397 Davisson Run Road
Clarksburg, WV 26301

RE: Area of Review – McDonald 1211 Well Pad (N-1H to N-5H)
Hydraulic Fracturing Notice

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Environmental Protection

WW-9
(4/16)

4704105701

API Number 47 - _____ - _____

Operator's Well No. McDonald 1211 N-5H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name HG Energy II Appalachia, LLC OP Code 494501907

Watershed (HUC 10) Middle West Fork Creek Quadrangle West Milford 7.5'

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: NA

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

Proposed Disposal Method For Treated Pit Wastes:

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

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

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

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

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

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

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

-Landfill or offsite name/permit number? See Attached

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

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

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

Company Official Signature Diane White

Company Official (Typed Name) Diane White

Company Official Title Agent

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Office of Oil and Gas

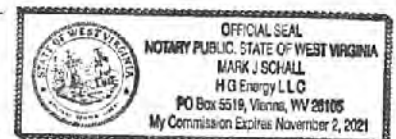
AUG 16 2019

WV Department of
Environmental Protection

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

[Signature] Notary Public

My commission expires 11/2/2021



HG Energy II Appalachia, LLC

Proposed Revegetation Treatment: Acres Disturbed 22.75 Prevegetation pH _____

Lime _____ 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20

Fertilizer amount _____ 500 lbs/acre

Mulch Hay _____ 2 Tons/acre

Seed Mixtures

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

Maintain E&S controls through the drilling and completion process

Attach:

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Bary Stump

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

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

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Office of Oil and Gas

AUG 16 2019

WV Department of
Environmental Protection

Title: Oil & Gas Inspector Date: 8-12-19

Field Reviewed? Yes No

Cuttings Disposal/Site Water**Cuttings -Haul off Company:**

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

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

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

Disposal Locations:

Apex Environmental, LLC Permit # 06-08488
11 County Road 78
Amsterdam, OH 43903
740-548-4889

Westmoreland Waste, LLC Permit # 100277
111 Conner Lane
Belle Vernon, PA 15012
724-829-7694

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

Max Environmental Technologies, Inc. Facility Permit # PAD004835146 / 901071
233 Max Lane
Yukon, PA 25968
724-722-3500

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

Waste Management Kelly Run Permit # 100668
1801 Park Side Drive
Elizabeth, PA 15037
412-884-7569

Waste Management South Hills (Arnoni) Permit # 100582
3100 Hill Road
Liberty, PA 15129
724-348-7013
412-884-7569

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

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

Brooke County Landfill Permit # SWF-108-87 / 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
 804-455-3800

Energy Solutions, LLC Permit # UT 2300249
 428 West 800 South
 Suite 200
 Salt Lake City, UT 84101

Energy Solutions Services, Inc. Permit # R-79006-L24
 1550 Bear Creek Road
 Oak Ridge, TN 37830

Northern A-1 Environmental Services Permit ID MIP020906814
 8947 US 131 North, PO Box 1030
 Kalkaska, MI 49646
 281-258-9961

Water Haul off Companies:

Dynamic Structures, Clear Creek DOT # 720488
 3790 State Route 7
 New Waterford, OH 44445
 830-882-0164

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

Select Energy Services, LLC
 PO Box 208997
 Dallas, TX 75320-8997

Nuverra Environmental Solutions
 11942 Veterans Memorial Highway
 Masontown, WV 26542

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

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

Disposal Locations:

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

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

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

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

Force, Inc.
 1380 Rte. 286 Hwy. E, Suite 303
 Indiana, PA 15701

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

Equipment Transport
 1 Tyler Court
 Carlisle, PA 17015

Myers Well Service, -----
 2001 Ballpark Court
 Export, PA 15682

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

Nichols 1-A (SWIW #18)
 Permit # 3882
 800 Cherrington Pkwy, Suite 200
 Coraopolis, PA 15108
 412-829-7275

Grosella (SWIW #24)
 Permit # 4096
 Rt. 88
 Garrattsville, OH
 719-275-4816

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

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
 2680 Exposition, Suite 117
 Austin, TX 78703
 512-478-6545

Mozena #1 Well (SWIW # 18)
 Permit # 34-157-2-5511-00-00
 6867 E. State Street
 Newcomerstown, OH 43882
 740-763-3966

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

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

Dudley #1 UIC (SWIW #1)
 Permit # 34-121-2-2458-00-00
 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 15780
 304-323-6568

Chapin #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

HG Energy II Appalachia, LLC

Site Safety Plan

**McDonald 1211 Well Pad
636 Hollick Run Rd Jane Lew
Lewis County, WV 26378**

August 2019: Version 1

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

HG Energy II Appalachia, LLC

5260 Dupont Road

Parkersburg, WV 26101

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Office of Oil and Gas

AUG 16 2019

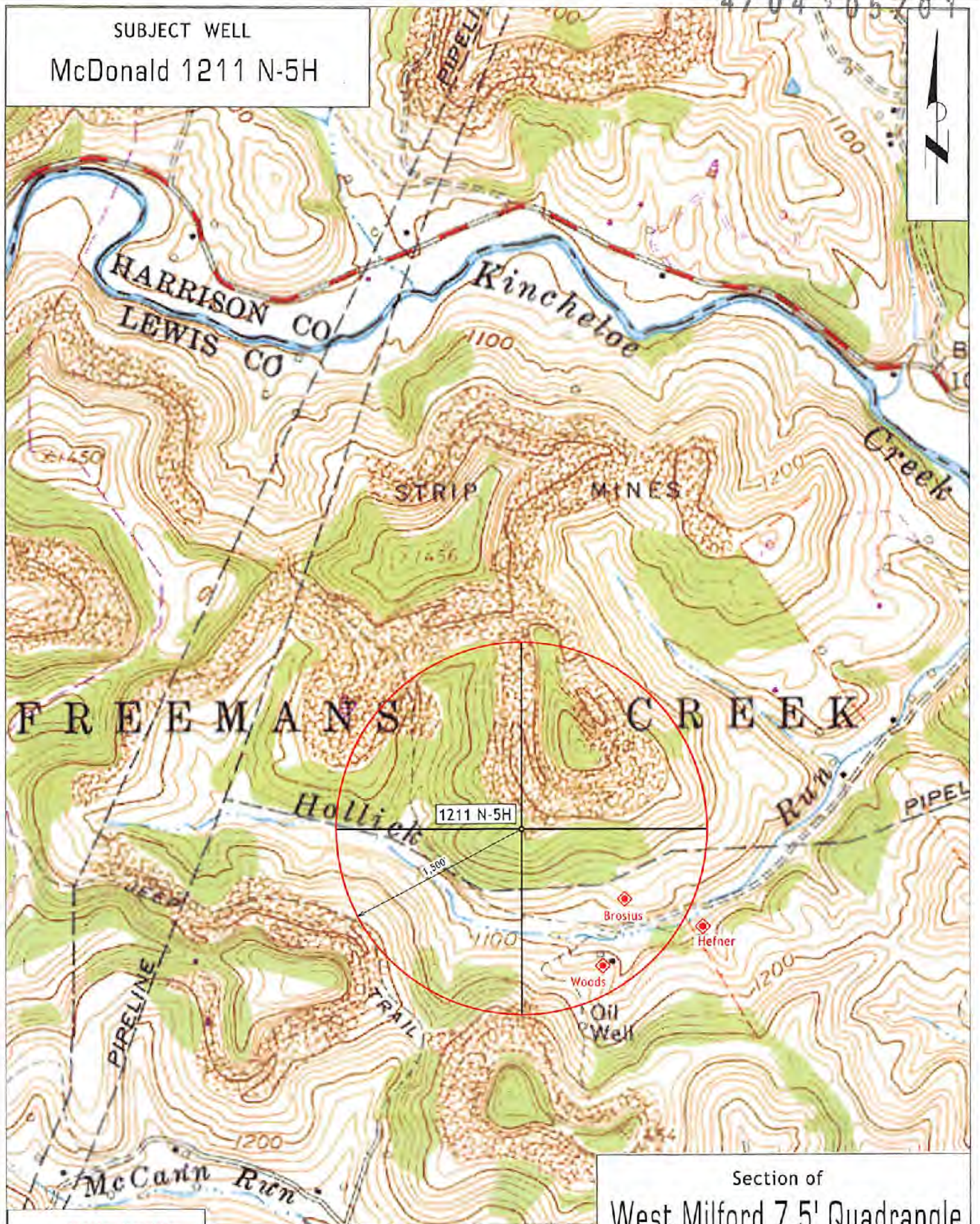
WV Department of
Environmental Protection

Darryl Stiles 8-12-19

4704 0570 1

SUBJECT WELL

McDonald 1211 N-5H



Denotes Possible Water Supply Source to be Tested

FEET (NORTH)

Section of West Milford 7.5' Quadrangle
SCALE 1"=1000'

HG Energy II Appalachia, LLC
Well No. 1211 N-5H MOD

I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

Dwayne D. Matheny
Dwayne D. Matheny, P.S. 2070

8,845' to Bottom Hole

4,547' to Top Hole
BTM LATITUDE 39 - 12 - 30
TOP LATITUDE 39 - 10 - 00

LONGITUDE 80 - 27 - 30

Tag	Bearing	Dist.
L1	S 76°20' W	2,949.9'
L2	N 75°51' W	2,336.3'
L3	N 29°27' W	2,064.7'
L4	N 46°51' E	1,191.4'
L5	N 36°47' E	1,204.2'

Notes:

Well No. 1211 N-5H
UTM NAD 1983 (USSF)
 Top Hole Coordinates
 N: 14,211,837.96'
 E: 1,789,516.42'
 Landing Point Coordinates
 N: 14,212,802.35'
 E: 1,790,237.59'
 Bottom Hole Coordinates
 N: 14,227,267.87'
 E: 1,785,126.01'

Notes: Well No. 1211 N-5H
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.

Top Hole coordinates
 Latitude: 39°08'02.02"
 Longitude: 80°28'27.72"
 Bottom Hole coordinates
 Latitude: 39°10'34.83"
 Longitude: 80°29'22.35"
UTM Zone 17, NAD 1983
 Top Hole Coordinates
 N: 4,331,776.874m
 E: 545,445.696m
 Bottom Hole Coordinates
 N: 4,336,479.920m
 E: 544,107.496m

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

GRID NORTH



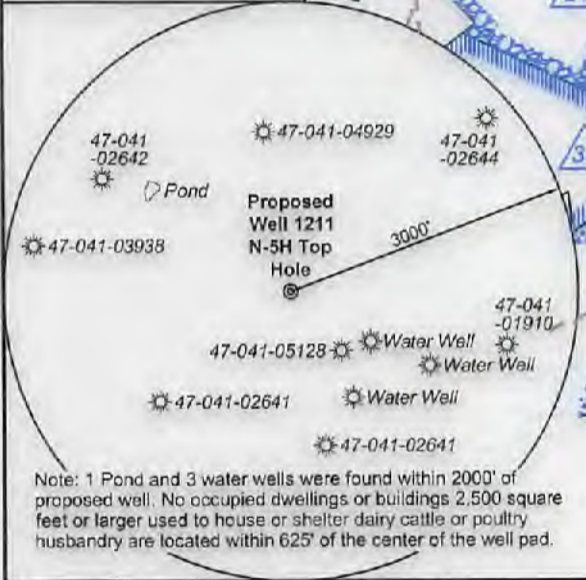
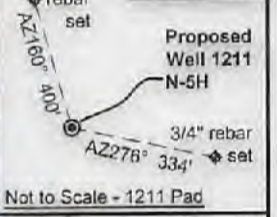
Legend

- Proposed gas well
- Well Reference, as noted
- Monument, as noted
- Existing Well, as noted
- Existing Plugged Well, as noted
- Digitized Well, as noted
- County Line
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)

Wellhead Layout (Not to Scale)



Well Location References



Note: 1 Pond and 3 water wells were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.

FILE NO: 79-36-12-U-F-18
 DRAWING NO: 1211 N-5H Well Plat
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

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

DATE: October 3 2019
 OPERATOR'S WELL NO. 1211 N-5H
 API WELL NO
 47 - 041 - 05701
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,265.5' WATERSHED: Middle West Fork Creek QUADRANGLE: West Milford
 DISTRICT: Freemans Creek COUNTY: Lewis
 SURFACE OWNER: HG Energy II Appalachia, LLC ACREAGE: 61.50
 ROYALTY OWNER: Mary R. Post, et al, et al LEASE NO: ACREAGE: 145.00

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) LP & BH MOD 6,800' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 22,693' MD

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



ID	Lease
1	J.L. Post, et al
2	HG Energy II Appalachia, LLC
3	Rosa L. Brown, et al
4	Cora B. Altman, et al
5	Guinn Minter, et al
6	HG Energy II Appalachia, LLC
7	W.R. Neeley, et al
8	HG Energy II Appalachia, LLC
9	J.H. Neeley & et al
10	R.C. McDonald, et al
11	R.C. McDonald, et ux, et al
12	B.F. Thrash, et ux
13	Lola McDonald, et al
14	George Paul Linn
15	HG Energy II Appalachia, LLC
16	Mary E. Post, et al
17	A.D. Beeghley & et al
18	Arthur Beeghley & et al
19	James Beeghley, et al
20	Guinn Minter, et al
21	A.W. Davis
22	Mary Robinson, et al
23	C.C. Ash
24	C.M. Garrett, et al
25	Worthy R. Lowman
26	W.L. Oldaker, et al
27	Worthy R. Lowman
28	William & Sue Gaston
29	E. Rider, et al
30	D.M. Cole, et al
31	Jesse B. Knight, et al
33	Guinn Minter, et al
34	L.W. Davis, et al
35	Henry L. Frashuer, et al
36	Henry L. Frashuer, et al

No.	TM / Par	Owner	Bk / Pg	Ac.
1	7B / 10	CNX Gas Company, LLC	680 / 286	61.50
2	7B / 11	CNX Gas Company, LLC	680 / 266	54.50
3	7B / 13	Melvin B. & Terri D. Woods	672 / 241	25.50
4	7B / 10.1	Charles H. & Vanessa D. Brosius	616 / 527	5.00
5	7B / 21	John J. Oldaker, Jr.	658 / 56	65.00
6	7B / 22	CNX Gas Company, LLC	680 / 266	73.676
7	7B / 23	Atlantic Coast Pipeline, LLC	700 / 779	167.89
8	7B / 9	Brincefield Family Trust	588 / 740	56.76
9	7B / 1	Mary Lou Curry	681 / 626	98.12
10	6B / 40	Robert G. & Leah V. Burnside	660 / 388	126.50
11	444 / 15	Marjorie Neely	830 / 349	53.46
12	443 / 15	John C. & Donna R. Holden	1581 / 551	127.94
13	443 / 29.3	Ruth Burnside	1268 / 1168	1.426
14	443 / 29.1	Laurie D. & Marion D. Watts Jr.	1462 / 1312	0.70
15	443 / 29	Danny L. & Rebecca A. Stickel	1258 / 1130	39.01
16	443 / 29.2	Steve L. & Nadine J. Villers	1226 / 203	0.21
17	443 / 14	Steve L. & Nadine J. Villers	1180 / 529	102.03
18	443 / 16	Elizabeth Ann Summerfield	1548 / 263	11.92
19	423 / 28	Christopher M. Gillespie, et al	1479 / 475	88.00
20	423 / 27	James C. Garrett	1412 / 891	128.82
21	423 / 8	James McDonald	1570 / 597	176.00
22	423 / 7	K. Wade & Mary M. Dickinson	1275 / 942	197.98
23	423 / 6	K. Wade & Mary M. Dickinson	1275 / 492	127.39
24	423 / 20	Jefferson Lambert & Linda J. Ashcraft	1320 / 409	56.47
25	423 / 20.2	Edward W. & Leeann Gump	1320 / 404	1.93
26	423 / 20.1	Edward W. & Leeann Gump	1426 / 1200	7.54
27	423 / 5	Ernest Aubrey Rider	1136 / 136	137.48
28	423 / 6.1	Ronald L. & Susan D. Cochran	1588 / 403	0.34
29	423 / 7.1	Ronald L. & Susan D. Cochran	1588 / 403	0.38
30	423 / 7.5	Ronald L. & Susan D. Cochran	1588 / 403	0.30
31	423 / 7.2	Jason Murphy	1386 / 378	0.38
32	423 / 7.3	Ronald L. & Susan D. Cochran	1588 / 403	0.26
33	423 / 7.8	Gary Leonard & Roberta L. Gray	1268 / 729	1.52
34	423 / 7.6	Gary Leonard & Roberta L. Gray	1244 / 1218	1.00
35	403 / 26	Anthony G. Queen Estates	1320 / 223	1.03
36	403 / 25	Carol Daugherty Skidmore	WB145/359	201.00
37	403 / 27	Mary V. Gabriel	WB146/481	63.00

FILE NO: 79-36-12-U-F-18
DRAWING NO: 1211 N-5H Well Plat
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY:
Submeter
PROVEN SOURCE OF ELEVATION:
CORS, Bridgeport, WV



DATE: October 3 2019
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API WELL NO
47 — 041 — 05701
STATE COUNTY PERMIT

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 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 22,693' MD

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

HG Energy II Appalachia, LLC
Well No. 1211 N-5H MOD

1211 N-5H
Bottom Hole

Page 1 of 2

I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

Dwayne D. Matheny, P.S. 2070

8,845' to Bottom Hole

4,547' to Top Hole

BTM LATITUDE 39 - 12 - 30

TOP LATITUDE 39 - 10 - 00

LONGITUDE 80 - 27 - 30

Tag	Bearing	Dist.
L1	S 76°20' W	2,949.9'
L2	N 75°51' W	2,336.3'
L3	N 29°27' W	2,064.7'
L4	N 46°5' E	1,191.4'
L5	N 36°47' E	1,204.2'

Notes:

Well No. 1211 N-5H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,211,837.90'
E: 1,769,516.42'
Landing Point Coordinates
N: 14,212,802.35'
E: 1,790,237.59'
Bottom Hole Coordinates
N: 14,227,267.87'
E: 1,785,126.01'

Notes: Well No. 1211 N-5H
West Virginia Coordinate System of 1927, North Zone
based upon Differential GPS

Measurements:

Top Hole coordinates
Latitude: 39°08'02.02"
Longitude: 80°28'27.72"
Bottom Hole coordinates
Latitude: 39°10'34.83"
Longitude: 80°29'22.35"
UTM Zone 17, NAD 1983
Top Hole Coordinates
N: 4,331,776.874m
E: 545,445.696m
Bottom Hole Coordinates
N: 4,336,479.920m
E: 544,107.496m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

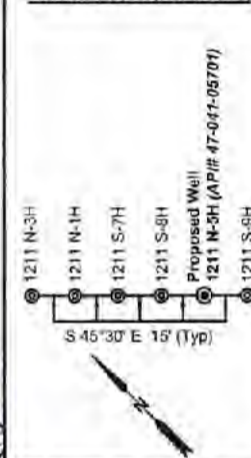


SEAL

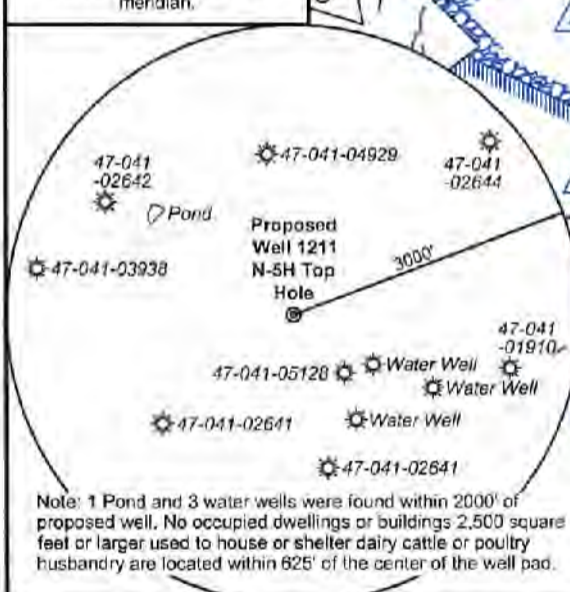
Legend

- Proposed gas well
- Well Reference, as noted
- ⊙ Monument, as noted
- ⊛ Existing Well, as noted
- ⊛ Existing Plugged Well, as noted
- ⊛ Digitized Well, as noted
- County Line
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)

Wellhead Layout (Not to Scale)



Well Location References



Note: 1 Pond and 3 water wells were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.



FILE NO: 79-36-12-U-F-18
DRAWING NO: 1211 N-5H Well Plat
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

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

DATE: October 3 2019
OPERATOR'S WELL NO. 1211 N-5H
API WELL NO
47 - 041 - 05701
STATE COUNTY PERMIT

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


LOCATION: ELEVATION: 1,265.5' WATERSHED: Middle West Fork Creek QUADRANGLE: West Milford
DISTRICT: Freemans Creek COUNTY: Lewis
SURFACE OWNER: HG Energy II Appalachia, LLC ACREAGE: 61.50
ROYALTY OWNER: Mary R. Post, et al, et al LEASE NO: ACREAGE: 145.00
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) LP & BH MOD 6,800' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 22,693' MD

WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diana C. White
ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101 Parkersburg, WV 26101



ID	Lease
1	J.L. Post, et al
2	HG Energy II Appalachia, LLC
3	Rosa L. Brown, et al
4	Cora B. Allman, et al
5	Guinn Minter, et al
6	HG Energy II Appalachia, LLC
7	W.R. Neeley, et al
8	HG Energy II Appalachia, LLC
9	J.H. Neeley & et al
10	R.C. McDonald, et al
11	R.C. McDonald, et ux, et al
12	B.F. Thrash, et ux
13	Lola McDonald, et al
14	George Paul Linn
15	HG Energy II Appalachia, LLC
16	Mary E. Post, et al
17	A.D. Beeghley & et al
18	Arthur Beeghley & et al
19	James Beeghley, et al
20	Guinn Minter, et al
21	A.W. Davis
22	Mary Robinson, et al
23	C.C. Ash
24	C.M. Garrett, et al
25	Worthy R. Lowman
26	W.L. Oldaker, et al
27	Worthy R. Lowman
28	William & Sue Gaston
29	E. Rider, et al
30	D.M. Cole, et al
31	Jesse B. Knight, et al
33	Guinn Minter, et al
34	L.W. Davis, et al
35	Henry L. Frashuer, et al
36	Henry L. Frashuer, et al

No.	TM / Par	Owner	Bk / Pg	Ac.
1	7B / 10	CNX Gas Company, LLC	680 / 266	61.50
2	7B / 11	CNX Gas Company, LLC	680 / 266	54.50
3	7B / 13	Melvin B. & Terri D. Woods	672 / 241	25.50
4	7B / 10.1	Charles H. & Vanessa D. Brosius	616 / 527	5.00
5	7B / 21	John J. Oldaker, Jr.	658 / 56	65.00
6	7B / 22	CNX Gas Company, LLC	680 / 266	73.676
7	7B / 23	Atlantic Coast Pipeline, LLC	700 / 779	167.89
8	7B / 9	Brincefield Family Trust	588 / 740	56.76
9	7B / 1	Mary Lou Curry	681 / 628	98.12
10	6B / 40	Robert G. & Leah V. Burnside	660 / 388	126.50
11	444 / 15	Marjorie Neely	830 / 349	53.48
12	443 / 15	John C. & Donna R. Holden	1581 / 551	127.94
13	443 / 29.3	Ruth Burnside	1268 / 1168	1.426
14	443 / 29.1	Laurie D. & Marion D. Watts Jr.	1462 / 1312	0.70
15	443 / 29	Danny L. & Rebecca A. Stickel	1258 / 1130	39.01
16	443 / 29.2	Steve L. & Nadine J. Villers	1226 / 203	0.21
17	443 / 14	Steve L. & Nadine J. Villers	1180 / 529	102.03
18	443 / 16	Elizabeth Ann Summerfield	1548 / 263	11.92
19	423 / 28	Christopher M. Gillespie, et al	1479 / 475	88.00
20	423 / 27	James C. Garrett	1412 / 891	128.82
21	423 / 8	James McDonald	1570 / 597	176.00
22	423 / 7	K. Wade & Mary M. Dickinson	1275 / 942	197.98
23	423 / 6	K. Wade & Mary M. Dickinson	1275 / 492	127.39
24	423 / 20	Jefferson Lambert & Linda J. Ashcraft	1320 / 409	56.47
25	423 / 20.2	Edward W. & Leeann Gump	1320 / 404	1.93
26	423 / 20.1	Edward W. & Leeann Gump	1428 / 1200	7.54
27	423 / 5	Ernest Aubrey Rider	1136 / 136	137.48
28	423 / 6.1	Ronald L. & Susan D. Cochran	1588 / 403	0.34
29	423 / 7.1	Ronald L. & Susan D. Cochran	1588 / 403	0.38
30	423 / 7.5	Ronald L. & Susan D. Cochran	1588 / 403	0.30
31	423 / 7.2	Jason Murphy	1386 / 378	0.38
32	423 / 7.3	Ronald L. & Susan D. Cochran	1588 / 403	0.26
33	423 / 7.8	Gary Leonard & Roberta L. Gray	1268 / 729	1.52
34	423 / 7.6	Gary Leonard & Roberta L. Gray	1244 / 1218	1.00
35	403 / 26	Anthony G. Queen Estates	1320 / 223	1.03
36	403 / 25	Carol Daugherty Skidmore	WB145/369	201.00
37	403 / 27	Mary V. Gabriel	WB146/481	63.00

FILE NO: 79-36-12-U-F-18	 <p>STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION</p>	DATE: October 3 20 19
DRAWING NO: 1211 N-5H Well Plat		OPERATOR'S WELL NO. 1211 N-5H
SCALE: 1" = 2000'		API WELL NO
MINIMUM DEGREE OF ACCURACY: Submeter		47 — 041 — 05701
PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV		STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,265.5' WATERSHED: Middle West Fork Creek QUADRANGLE: West Milford
DISTRICT: Freemans Creek COUNTY: Lewis
SURFACE OWNER: HG Energy II Appalachia, LLC ACREAGE: 61.50
ROYALTY OWNER: Mary R. Post, et al, et al LEASE NO: _____ ACREAGE: 145.00

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) LP & BH MOD 6.800' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 22,693' MD

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

WW-6A1
(5/13)

Operator's Well No. McDonald 1211 N-5H

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

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

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
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** See Attached Sheets **

RECEIVED
Office of Oil and Gas

OCT 15 2019

WV Department of
Environmental Protection

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

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

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

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

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

4704105701

OCT 15 2019

HG Energy II Appalachia, LLC
1211 N - 5H LEASE CHAIN

WV Department of
Environmental Protection

TRACT #	LEGACY LEASE NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE
16	FK053254	03-007B-0010-0000 03-007B-0011-0000 03-007B-0013-0000 p/o 03-007B-0010-0001	Q10048600	MARY E. POST; J. L. POST; F. L. POST AND B. J. POST, HIS WIFE; IDA B. GASTON AND CLARK GASTON, HER HUSBAND; G. W. POST AND FLAVA POST, HIS WIFE	RESERVE GAS COMPANY	NOT LESS THAN 1/8	68	291
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	620	139
				DOMINION EXPLORATION & PRODUCTION, INC.	DOMINION TRANSMISSION, INC.	ASSIGNMENT	651	137
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527 ✓				
20	FK108080	20-0443-0029-0000 20-0443-0029-0001 20-0443-0029-0003 20-0444-0002-0000 20-0444-0001-0000 20-0444-0024-0000 20-00444-0025-0000 p/o 03-007B-0001-0000 p/o 03-007B-0001-0000 p/o 20-0443-0015-0000 p/o 20-0443-0016-0000 p/o 20-0443-0015-0000	Q101020000	GUINN MINTER AND JANE MINTER, HIS WIFE	RESERVE GAS COMPANY	NOT LESS THAN 1/8	LEWIS 227 HARRISON 174	174 203
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	LEWIS 155 HARRISON 508	202 573
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	LEWIS 294 HARRISON 903	89 179
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	LEWIS 425 HARRISON 1136	127 250
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	LEWIS 672 HARRISON 1522	154 33
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO MEMORANDUM FARMOUT AGREEMENT	HARRISON 1524	491
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	LEWIS 684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	LEWIS 712 HARRISON 1576	848 125
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	LEWIS 717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	LEWIS 722 HARRISON 1600	139 660
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	HARRISON 1600	692
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	LEWIS 723	527
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	LEWIS 723 HARRISON 1601	499 581 ✓				
			JAMES M. BEEGHLEY AND ETTA BEEGHLEY, HIS WIFE	RESERVE GAS COMPANY	NOT LESS THAN 1/8	68	300	

OCT 15 2019

WV Department of
Environmental Protection

Case No.	File No.	Order No.	Case Name	Company	Document Type	Page 1	Page 2	
19	FK053257	All or p/o 03-007B-0008-0000	Q101026000 HGII139	RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	CORRECTIVE ASSIGNMENT	725	784
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527
		SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499				
18	FK064207	03-007B-0007-0000	Q100296000 HGII141	ARTHUR D. BEEGHLEY AND ETTA M. BEEGHLEY, HIS WIFE; MARY B. WIMER AND A. L. WIMER, HER HUSBAND; GERTRUDE SMITH AND HOMER W. SMITH, HER HUSBAND; H. E. BEEGHLEY AND RENNA BEEGHLEY, HIS WIFE; AND EARL BEEGHLEY AND FLORA BEEGHLEY, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	219	503
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	CORRECTIVE ASSIGNMENT	725	784
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499				
17	FK064208	03-007B-0006-0000	Q100594000 HGII140	ARTHUR D. BEEGHLEY AND ETTA M. BEEGHLEY, HIS WIFE; MARY B. WIMER AND A. L. WIMER, HER HUSBAND; GERTRUDE SMITH AND HOMER W. SMITH, HER HUSBAND; H. E. BEEGHLEY AND RENNA BEEGHLEY, HIS WIFE; AND EARL BEEGHLEY AND FLORA BEEGHLEY, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	219	490
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499
				ROSA L. BROWN AND WADE H. BROWN, HER HUSBAND	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	224	230
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672	154

3	FK064839	p/o 03-007B-0005-000	Q1100982000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	CORRECTIVE ASSIGNMENT AND BILL OF SALE	725	784
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	139
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF	723	527
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	499
				4	FK064848	p/o 03-007B-0023-000	Q1100599000	CORA B. ALLMAN AND S. M. ALLMAN, HER HUSBAND
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294					89
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425					127
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS					
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	672					154
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684					57
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712					848
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717					1
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722					139
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722					170
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723					527
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723					499
GUINN MINTER AND JANE MINTER, HIS WIFE	RESERVE GAS COMPANY	NOT LESS THAN 1/8	LEWIS 227 HARRISON 174					174 203
RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	LEWIS 155 HARRISON 508					202 573
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	LEWIS 294 HARRISON 903					89 179
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	LEWIS 425 HARRISON 1136					127 250
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS					
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	LEWIS 672 HARRISON 1522					154 33
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO MEMORANDUM FARMOUT AGREEMENT	HARRISON 1524					491
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	LEWIS 684 HARRISON 1543					57 1235
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	LEWIS 712 HARRISON 1576					848 125
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	LEWIS 717 HARRISON 1584					1 942
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	LEWIS 722 HARRISON 1600	139 660				
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	HARRISON 1600	692				
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	LEWIS 723	527				
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	LEWIS 723 HARRISON 1601	499 581				
W.R. NEELY AND L.E. NEELY	RESERVE GAS COMPANY	NOT LESS THAN 1/8	174	205				

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7	FK052898	20-0443-0015-0000 20-0444-0015-0000	Q100381000	EDWARD G. SMITH AND JESSIE B. SMITH	RESERVE GAS COMPANY	FEE CONVEYANCE	77	264				
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	FEE CONVEYANCE	508	573				
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPERATION	MERGER/NAME CHANGE	903	179				
				CONSOLIDATED GAS SUPPLY CORPERATION	CONSOLIDATED GAS TRANSMISSION CORPERATION	ASSIGNMENT	1136	250				
				CONSOLIDATED GAS TRANSMISSION CORPERATION	CNG GAS TRANSMISSION CORPERATION	MERGER/NAME CHANGE	51	795				
				CNG GAS TRANSMISSION CORPERATION	DOMINION TRANSMISSION, INC	MERGER/NAME CHANGE	58	362				
				DOMINION TRANSMISSION, INC	CNX GAS COMPANY, LLC	FARMOUT AGREEMENT	1522	33				
				DOMINION TRANSMISSION, INC	CNX GAS COMPANY, LLC	AMENDMENT TO FARMOUT AGREEMENT	1524	491				
				CNX GAS COMPANY, LLC	NOBLE ENERGY, INC	LIMITED PARTIAL ASSIGNMENT OF FARMOUT	1543	1235				
				CNX GAS COMPANY, LLC	NOBLE ENERGY, INC	ASSIGNMENT	1584	942				
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692				
				DOMINION TRANSMISSION INC	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
				DOMINION ENERGY TRANSMISSION INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581				
				8	FK052752	20-0443-0015-0000 20-0444-0016-0000 20-0444-0017-0000 20-0444-0018-0000 20-0444-0018-0001 p/o 03-0007-0001-0000 04-007B-0001-0000	FK052752 FEE	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC AND NOBLE ENERGY, INC	NOT LESS THAN 1/8	HARRISON 1601 LEWIS 692	563 570
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	HARRISON 1522 LEWIS 672					33 154				
DOMINION TRANSMISSION INC	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS									
DOMINION ENERGY TRANSMISSION INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	HARRISON 1601 LEWIS 723					581 257				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT AND BILL OF SALE	HARRISON 1584 LEWIS 717					942 1				
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT, BILL OF SALE AND CONVEYANCE	HARRISON 1600 LEWIS 722					660 139				
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FEE CONVEYANCE	1627					1254				
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	HARRISON 1621 LEWIS 734					1295 558				
9	FK064871	20-0443-0014-0000 20-0443-0016-0000 p/o 20-0443-0028-0000	Q100993000					J. H. NEELY ANDCLAUDIE NEELY, HIS WIFE (1/2)	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	732	315
								WM. A. JACKSON (1/2)	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	769	40
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	903	179				
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250				
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS					
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
				DOMINION TRANSMISSION, INC.	CONSOL ENERGY HOLDINGS LLC VI, CONSOL ENERGY HOLDINGS LLC XVI, CONSOL GAS COMPANY LLC, CNX GAS COMPANY LLC	MERGER/NAME CHANGE	1472	294				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	1522	33				
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125				
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT AND BILL OF SALE	1584	942				
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT, BILL OF SALE AND CONVEYANCE	1600	660				
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT, BILL OF SALE AND CONVEYANCE	1600	692				
				DOMINION TRANSMISSION INC	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION ENERGY TRANSMISSION INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581								
	C.M. GARRETT AND DELPHIA GARRETT, HIS WIFE; CHARLES M. GARRETT, JR. AND HILDA GARRETT, HIS WIFE; JOSEPH R. GARRETT	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	727	333							

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24	FK064358	20-423-0027-0000	Q100857000	HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	903	179
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	1522	33
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT AND BILL OF SALE	1584	942
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT, BILL OF SALE AND CONVEYANCE	1600	660
				DOMINION ENERGY TRANSMISSION INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581
10	FK052942	20-0423-0028-0000	Q100477000	R. C. MCDONALD AND M. B. MCDONALD, HIS WIFE; AND A. M. MCDONALD AND LYDIA D. MCDONALD, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	237	89
				HOPE NATURAL GAS COMPANY	RESERVE GAS COMPANY	ASSIGNMENT	271	388
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	508	573
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	903	179
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	1522	33
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
				DOMINION TRANSMISSION INC	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT AND BILL OF SALE	1584	942
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT AND BILL OF SALE	1600	660
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT AND BILL OF SALE	1600	692
				DOMINION TRANSMISSION INC	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581				
11	FK026553	17-20-0423-0008-0000, 17-20-0423-0007-0000	Q100462000	R C MCDONALD, M.B. MCDONALD; A.M. MCDONALD AND LYDIA MCDONALDET AL	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	237	94
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPERATION	MERGER/NAME CHANGE	903	179
				CONSOLIDATED GAS SUPPLY CORPERATION	CONSOLIDATED GAS TRANSMISSION CORPERATION	ASSIGNMENT	1136	250
				CONSOLIDATED GAS TRANSMISSION CORPERATION	CNG GAS TRANSMISSION CORPERATION	MERGER/NAME CHANGE	51	795
				CNG GAS TRANSMISSION CORPERATION	DOMINION TRANSMISSION, INC	MERGER/NAME CHANGE	58	362
				DOMINION TRANSMISSION, INC	CNX GAS COMPANY, LLC	FARMOUT AGREEMENT	1522	33
				CNX GAS COMPANY, LLC	NOBLE ENERGY, INC	LIMITED PARTIAL ASSIGNMENT	1543	1235
				CNX GAS COMPANY, LLC	NOBLE ENERGY, INC	ASSIGNMENT	1584	942
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT AND BILL OF SALE	1600	660
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT AND BILL OF SALE	1600	692
				DOMINION TRANSMISSION INC	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581
								B. F. THRASH AND M. E. THRASH, HIS WIE
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	903					179
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136					250
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51					795

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12	FK014710	20-0423-0006-0000 20-0423-0006-0001 p/o 20-0423-0007-0000 p/o 20-0423-0008-0000	Q101152000	CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1374	110
				DOMINION EXPLORATION & PRODUCTION, INC.	DOMINION TRANSMISSION, INC.	ASSIGNMENT	1457	978
				DOMINION TRANSMISSION INC	CONSOL ENERGY HOLDINGS LLC XVI	ASSIGNMENT (WELL #6597)	1458	299
				CONSOL ENERGY HOLDINGS LLC XVI	CONSOL GAS COMPANY	MERGER/NAME CHANGE	59	1019
				CONSOL GAS COMPANY	CNX GAS COMPANY LLC	MERGER/NAME CHANGE	1472	294
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	1522	33
						FIRST AMENDMENT TO MEMORANDUM FARMOUT AGREEMENT	1524	491
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	1543	1235
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1576	125
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT AND BILL OF SALE	1584	942
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA LLC	ASSIGNMENT, BILL OF SALE AND CONVEYANCE	1600	660
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581
				28	FK002350	20-0423-0020-0000 20-0423-0020-0001 20-0423-0020-0002	Q101147000	WILLIAM GASTON AND SUE GASTON, HIS WIFE
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	903					179
PENNZOIL COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	ASSIGNMENT	1126					2
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136					250
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51					795
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58					362
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	1522					33
		FIRST AMENDMENT TO MEMORANDUM FARMOUT AGREEMENT	1524					491
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543					1235
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576					125
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT AND BILL OF SALE	1584					942
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA LLC	ASSIGNMENT, BILL OF SALE AND CONVEYANCE	1600					660
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
		SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601					581
13	FK076952	20-0423-0007-0000 20-0423-0007-0004 20-0423-0007-0007	Q101000000					LOLA MCDONALD, WIDOW; E. B. MCDONALD AND GARNET L. MCDONALD, HIS WIFE; MACEL R. NICHOLSON AND W. B. NICHOLSON, HER HUSBAND; BARBARA V. HARRIS AND RICHARD R. HARRIS, HER HUSBAND; LUCILE M. WALLS, JOHN R. MCDONALD AND NINA MCDONALD, HIS WIFE; FRANK H. MCDONALD AND EVELYN B. MCDONALD, HIS WIFE; W. PAUL MCDONALD AND FRED A. G. MCDONALD, HIS WIFE; ROBERT H. MCDONALD AND EVELYN MCDONALD, HIS WIFE; AND MARY MCDONALD, SINGLE
				ALAMCO, INC. FORMERLY ALLEGHENY LAND AND MINERAL COMPANY	ENSOURCE INC.	PARTIAL ASSIGNMENT	1170	609
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
				ALAMCO INC	UMC PETROLEUM CORPORATION	ASSIGNMENT	1218	1012
				UMC PETROLEUM CORPORATION	ASHLAND EXPLORATION CORPORATION INC	ASSIGNMENT	1263	494
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
				DOMINION TRANSMISSION INC	DOMINION EXPLORATION AND PRODUCTION	ASSIGNMENT	1340	815
				DOMINION EXPLORATION & PRODUCTION, INC.	DOMINION TRANSMISSION, INC.	ASSIGNMENT	1457	978
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	1522	33
						FIRST AMENDMENT TO MEMORANDUM FARMOUT AGREEMENT	1524	491
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	1543	1235
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1576	125
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125

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CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT AND BILL OF SALE	1584	942
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA LLC	ASSIGNMENT, BILL OF SALE AND CONVEYANCE	1600	660
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581
IRENE Q. LINN AND G. PAUL LINN, HER HUSBAND	CONSOLIDATED GAS SUPPLY CORPORATION	NOT LESS THAN 1/8	935	629
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	1522	33
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT AND BILL OF SALE	1584	942
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA LLC	ASSIGNMENT, BILL OF SALE AND CONVEYANCE	1600	660
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581
LUCY W QUEEN ET AL	HOPE NATUAL GAS COMPANY	FEE CONVEYANCE	239	183
RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	FEE CONVEYANCE	508	573
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPERATION	MERGER/NAME CHANGE	903	179
CONSOLIDATED GAS SUPPLY CORPERATION	CONSOLIDATED GAS TRANSMISSION CORPERATION	ASSIGNMENT	1136	250
CONSOLIDATED GAS TRANSMISSION CORPERATION	CNG GAS TRANSMISSION CORPERATION	MERGER/NAME CHANGE	51	795
CNG GAS TRANSMISSION CORPERATION	DOMINION TRANSMISSION, INC	MERGER/NAME CHANGE	58	362
DOMINION TRANSMISSION, INC	CNX GAS COMPANY, LLC	FARMOUT AGREEMENT	1522	33
CNX GAS COMPANY, LLC	NOBLE ENERGY, INC	LIMITED PARTIAL ASSIGNMENT OF FARMOUT	1543	1235
CNX GAS COMPANY, LLC	NOBLE ENERGY, INC	ASSIGNMENT	1584	942
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FAF	1601	581
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FEE CONVEYANCE	1627	1254

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

August 5, 2019

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

RE: Drilling Under Roads – McDonald 1211 N-5H
Freemans Creek District, Lewis 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 or 304-420-1119.

Very truly yours,

Diane White

Diane C. White

Enclosures

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

Date of Notice Certification: 08/07/2019

API No. 47- _____
Operator's Well No. McDonald 1211 N-5H
Well Pad Name: McDonald Well Pad

Notice has been given:

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

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>545445.7</u>
County:	<u>Lewis</u>		Northing:	<u>4331776.9</u>
District:	<u>Freemans Creek</u>	Public Road Access:	<u>SR 1 / Hollick Run Road</u>	
Quadrangle:	<u>West Millford</u>	Generally used farm name:	<u>McDonald</u>	
Watershed:	<u>Middle West Fork Creek</u>			

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

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input 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: 100px;"><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>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
<p>RECEIVED Office of Oil and Gas AUG 16 2019</p>	

Required Attachments:

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

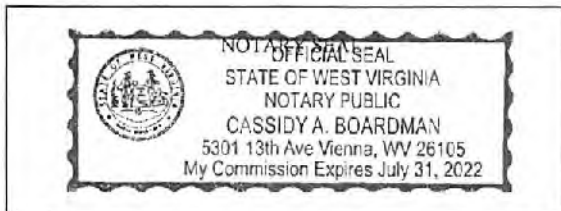
WV Department of
Environmental Protection

WW-6AC
(1/12)

Certification of Notice is hereby given:

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

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



Subscribed and sworn before me this 7th day of August, 2019.

Cassidy A. Boardman Notary Public

My Commission Expires 7/31/2022

Oil and Gas Privacy Notice:

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

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Environmental Protection

WW-6A
(9-13)

API NO. 47-
OPERATOR WELL NO. McDonald 1211 N-5H
Well Pad Name: McDonald 1211

**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: 08/07/19 **Date Permit Application Filed:** 08/15/19

Notice of:

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

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

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

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

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

SURFACE OWNER(s)

Name: HG Energy II Appalachia, LLC (Pad and Road)
Address: 5260 Dupont Road
Parkersburg, WV 26101

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: _____
Address: _____

COAL OPERATOR

Name: _____
Address: _____

SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)

Name: <u>Charles & Vanessa Brosius</u>	<u>Melvin & Terri Woods</u>
Address: <u>1050 Hollick Run Road</u>	<u>54 Orchard Drive</u>
<u>Jane Lew, WV 26378</u>	<u>Jane Lew, WV 26378</u>

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

Name: Dominion Energy Transmission - Attn: Ronald Waldren
Address: 925 White Oaks Blvd
Bridgeport, WV 26330

*Please attach additional forms if necessary

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Environmental Protection

Notice is hereby given:

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

This Notice Shall Include:

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

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

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

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

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting 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 57th St. SE
Charleston, WV 25304
(304) 926-0450

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Environmental Protection

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

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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4704305701
API NO. 47-
OPERATOR WELL NO. McDonald 1211 N-5H
Well Pad Name: McDonald 1211

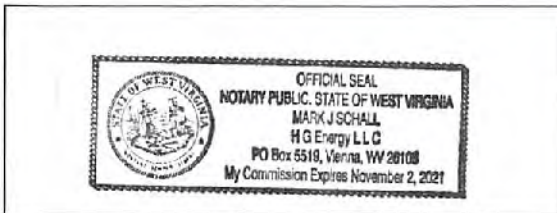
Notice is hereby given by:

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

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

Oil and Gas Privacy Notice:

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



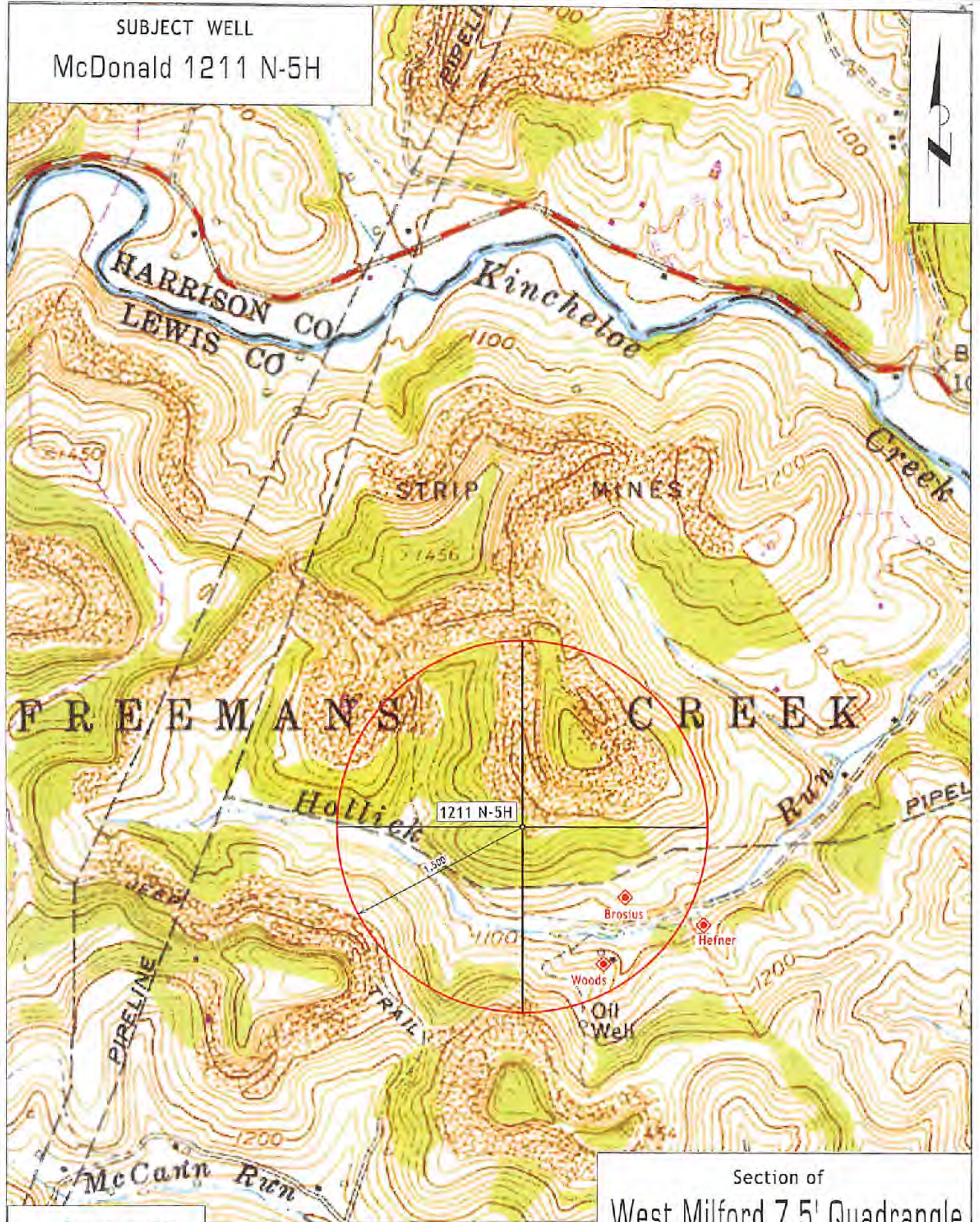
Subscribed and sworn before me this 12th day of August, 2019.

[Signature] Notary Public

My Commission Expires 11/2/2021

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SUBJECT WELL
McDonald 1211 N-5H



◆ Denotes Possible Water Supply Source to be Tested

FEET (NORTH)

Section of
West Milford 7.5' Quadrangle
SCALE 1"=1000'

Diane White

From: Diane White
Sent: Wednesday, June 19, 2019 1:26 PM
To: Vickie Hoops (vhoops@sturmenvvironmental.com)
Subject: FW: 1211 WSW Owners

Vicki,

There are three sites with water wells which we'll want to be tested, if the owners allow. I don't have a plat or topo yet, but thought you might be able to locate the sites with their addresses. If not, let me know and I'll forward the location information on to you when I receive it.

The 1211 well pad site is in Lewis county, Freeman's Creek District and these water sources are within 1500'.

Please ask the Tech to identify all paperwork with the McDonald 1211 site.

Thanks,

Diane

From: Timothy Roush <troush@hgenergyllc.com>
Sent: Wednesday, June 19, 2019 1:15 PM
To: Diane White <dwhite@hgenergyllc.com>
Cc: Cassidy Boardman <cboardman@hgenergyllc.com>
Subject: 1211 WSW Owners

There are 3 WSW's near the 1211 Pad:

Charles & Vanessa Brosius
1050 Hollick Run Road
Jane Lew, WV 26378

Jerry Hefner
893 Hollick Run Road
Jane Lew, WV 26378

Melvin & Terri Woods
54 Orchard Drive
Buckhannon, WV 26201

Timothy P. Roush, PS
HG Energy, LLC
5260 Dupont Road
Parkersburg, WV 26101
troush@hgenergyllc.com
304-420-1120

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Environmental Protection

Sturm Environmental Services

* I N V O I C E *

Invoice Number: 071095 JOHN W. STURM, PRESIDENT

Invoice Date: 06/30/19

Page: 1

Sold H.G. ENERGY
To: 5260 DUPONT ROAD
PARKERSBURG, WV
26101

JUNE SERVICES
BROSIUS, HEFNER SAMPLES
WOOD-DECLINED
MCDONALD 1211 PAD

Due Date.: 07/30/19
Terms.....: Net 30

	Net

Pre-Drill Pkg; 2 sample(s) @\$84/sample	168.00
Field Technician; 4 hours @\$60/hour	240.00
Mileage; 81 miles @\$0.75/mile	60.75
Total....:	468.75

WE NOW ACCEPT MASTERCARD, VISA AND DISCOVER

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WV Department of
Environmental Protection

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF ENTRY FOR PLAT SURVEY**

Notice Time Requirement: Notice shall be provided at least SEVEN (7) days but no more than FORTY-FIVE (45) days prior to entry

Date of Notice: June 13, 2019 **Date of Planned Entry:** June 20, 2019

Delivery method pursuant to West Virginia Code § 22-6A-10a

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

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

SURFACE OWNER(s)

Name: HG Energy II Appalachia, LLC

Address: 5260 Dupont Road
Parkersburg, WV 26101

Name: _____

Address: _____

Name: _____

Address: _____

COAL OWNER OR LESSEE

Name: NA

Address: _____

MINERAL OWNER(s)

Name: ** See Attached Listing **

Address: _____

*please attach additional forms if necessary

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State: <u>West Virginia</u>	Approx. Latitude & Longitude: <u>39.133985 / -80.474181</u>
County: <u>Lewis</u>	Public Road Access: <u>SR 19/ Kincheloe Run/Hollick Run Road</u>
District: <u>Freemans Creek</u>	Watershed: <u>Hollick Run</u>
Quadrangle: <u>West Milford 7.5'</u>	Generally used farm name: <u>McDonald</u>

Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: HG Energy II Appalachia, LLC

Telephone: 304-420-1119

Email: dwhite@hgenergyllc.com

Address: 5260 Dupont Road
Parkersburg, WV 26101

Facsimile: 304-863-2172

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WW-6A3
(1-12)

1211N-5H

Page 1 Continued

Mineral Owners

Agnes June Coffindaffer
RR 2 168-A
Jane Lew, WV 26378

Agnes June Coffindaffer
568 Two Lick Rd
Jane Lew, WV 26378

Alice Virginia Life Bell
1700 8th Avenue NW
Largo, FL 33770

Alissa Kay Kerns
994 Barbour County Hwy
Belington, WV 26250

Alvin Fields Tharp Jr
3587 Perry Dr NW
Massillon, OH 44646

Ann Mason Brashear Fitzgerald
625 Windsor Place
Tyler, TX 75701

Appalachian Royalties Inc.
P.O. Box 1917
Clarksburg, WV 26301-1917

Appalachian Royalty Company LLC
3049 Robert C. Byrd Dr
Beckley, WV 25801

Arthur E Tennant
4304 Moore Ln
Culleoka, TN 38451

Avanelle M Ross
Rr 3 Box 15A
Salem, WV 26426

Barbara Gaston
605 Rr 1
Mount Clare, WV 26408

Barbara Jones
35 S Lake Dr.
Parkersburg, WV 26101

Barbara S Carroll
17 Azalea Dr
Charles Town, WV 25414

Betty Fridley
168 Cr1, Lost Creek
Lost Creek, WV 26385

Betty Moss Tallman
741 Mulberry Ct
Bensalem, PA 19020

Bradley Scott and Terri Lynn Stutler
725 Two Lick Road
Jane Lew, WV 26378

Bradley Simmons
1000 Twelve Oaks Dr
Elkins, WV 26241

Brett Cox
1800 Preston on Lake Blvd, Trlr 14
Little Elm, TX 75068

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Carl Wayne Young
PO Box 485
Mount Nebo, WV 26679

Carrie Pratt
198 Maple Ave
Clarksburg, WV 26301

Chad W. Johnson
509 Heritage Rd
Bridgeport, WV 26330

Chad W. Johnson
117 E Main St.
Bridgeport, WV 26301

Charles Greene
142 E. College St.
Scio, OH 43988

Charles R Gaston
4472 Loos Cir E.
Columbus, OH 43214

Charlotte Gatts
8087 Day Hill Arnheim Rd
Georgetown, OH 45121

Charlotte Wolfe
Rr1 Box 119A
Lost Creek, WV

Christine Gannon
8631 W Mary Ann Drive
Peoria, AZ 85382

Christine Mattson-Troyer
18548 Skagit City Rd
Mount Vernon, WA 98273

Christopher M. Gillespie
1820 Green Creek Dr.
Columbus, NC 28722

Clara Bernstein
c/o Jim Bernstein
11486 73rd Ter
Miami, FL 33173

Daniel Wolfe
RR1 Box 72
Lost Creek, WV 26385

Danielle Griffin Goff
31 Occupation Rd
Rivesville, WV 26588

David C. Riechel
3262 Boron Ave
Santa Rosa, CA 95407

David Gaston Jr
4559 Bolon Ave
Hillard, OH 43026

David L Andrick
18 New England River Rd
Washington, WV 26181

David Wolfe
PO Box 490
Palmyra, VA 22963

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Debbie Parker
Salem Manor, Apt 15
Salem, WV 26426

Deborah Ann Lynch Gilbert
206 Holiday Dr
Valentines, VA 23887

Denise Danielle Jordan
612 Thorncroft Dr
West Chester, PA 19380

Denise Springer
8 Deer Run
Hurricane, WV 26378

Dick Riechel
Delaware Ave #122
Santa Cruz, CA 95060

Dominion Transmission Inc.
P.O. Box 26666
Richmond, VA 23261-6666

Donald R Reynolds
PO Box 607
Jane Lew, WV 26378

Donald Wolfe
RR 190
Fairmont, WV 26554

Donna Baldwin
281 A Cessna Ave
Friday Harbor, WA 98250

Doris Ann Bowyer
1748 Dillon Hollow Rd.
Lost Creek, WV 26385

Doris Sandker
35160 Jimmerson Lk
Angola, IN 46703

Elaine Moss Kinzer
178 Windsor Ave.
Buena Vista, VA 24416

Elizabeth "Betty" Condon
381 Bunchberry Dr
Maineville, OH 45039

Elizabeth Bailey
PO Box 421
West Milford, WV 26451

Elizabeth Francene Kirk
986 Ashton PL
Morgantown, WV 26508

Elizabeth JoAnn White
3218 S. Ogemaw Trl.
West Branch, MI 48661

Eric Riggs
12819 Old School Rd Nw
Mount Savage, MD 21545

Evelyn McDonald
165 Two Licks Rd.
Jane Lew, WV 26378

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Floyd Spivey, Jr.
1100 Shannondale Dr
Raleigh, NC 27603

Gary Bailey
PO Box 477
West Milford, WV 26451

Gary Lynn Hinkle
250 Peake St, NE
Palm Bay, FL 32904

George R Rollyson Jr
16 Monterey Ln
Cross Lanes, WV 25313

Helen Brashear
1417 Hollytree Place
Tyler, TX 75703

Helen M. Burton
130 Powerll Ave
Stonewood, WV 26301

Ida Hofer
12050 Montgomery Rd
Cincinnati, OH 45249

James D. Alfred
4245 Andover Dr
Vallejo, CA 94951

James Elliot Alfred
14311 Burgoyne Rd
Houston, TX 77077

James F. Davis
230 Woodmire Drive
Milton, WV 25541

James I. McDonald
RR 1 Box 168-A
Lost Creek, WV 26385

James L Riggs JR
79 Spring St
Keyser, WV 26726

James M Andrick
RR3 Box 271
Washington, WV 26181

Jane Campbell McNeil
142 Whispering Woods Rd.
Charleston, WV 25304

Jane May
2447 Merrigan Pl.
Tallahassee, FL 32309

Jane Nicklin Bruce
PO Box 388
Lewisburg, WV 24901

Janet Adkins
6 Emerald St
Melbourne, FL 32904

Janet Myers
1502 Washington Ave.
Parkersburg, WV 26101

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Mineral Owners

Janet Smith
PO Box 364
Grafton, WV 26354

Jay L. Gillespie
334 Main St.
Beverly, WV 26253

Jean Ann Griffin
2665 Misty Morning Ln.
Rosewell, GA 30076

Jean Denning
18 Fairway Village Lane
Isle of Palms, SC 29451

Jennifer Olsen
2201 W El Prado Rd
Chandler, AZ 85224

Jenny Ankrom
PO Box 192
Cadiz, OH 43988

Jerry W Gaston
6297 Fredricks Rd,
Sunbury, OH 43074

Joe F. Moss
801 Valley Drive
Neward, DE 19711

Joellen F. Allman
725 Two Lick Road
Jane Lew, WV 26378

Joey Douglas Wolfe
17 Monongalia St
Buckhannon, WV 26201

John A. McDonald
3608 Pike Road
Ellenboro, WV 26343

John A. McDonald
RR 2 Box 180
Jane Lew, WV 26378

John Barbieri
1101 Houghton Green Ct
Apex, NC 27502

John D. Morris
11989 S Allerton Circle
Parker, CO 80138

John Fasciani
7675 Verandah Ct
Littleton, CO 80125

John Paul Shock, Jr.
9 Chardeaux Ct.
Little Rock, AR 72212

John Wells
494 Somerville Frk
Palestine, WV 26160

John Wilmer Norris, Jr.
60 Simpson Run Road
Weston, WV 26452

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Jonathan Hanst
1006 Willow Place
Lafayette, CO 80026

Joyce Edwards
aka Joyce Love
5031 Garfield Rd
Palestine, WV 26160

Judith Ann Smith Rowe
504 Village Place
Pelham, AL 35124

Junior Ray Waid
3393 SR 305
Southington, OH 44470

Karen Clark
235 N Water St
Keyser, WV 26726

Karen Gumz
701 Sitka Street
Fort Collins, CO 80524

Karen Warsaw
5713 Penguin Dr
Roanoke, VA 24018

Karl Dwane Parker
2252 The Circle
Washington, PA 15301

Karla Thorndell
2785 Petobego Ct
Cincinnati, OH 45249

Kathryn S Sullivan
223 McCarty Rd
Fredericksburg, VA 22405

Kathy Jones
61 River Road
Pembroke, ME 04666

Kenneth Snider
4820 Old Main St #511
Henrico, VA 23231

Kimberly Ann Ferree
4067 Roweling Oak Crt
Tallahassee, FL 32303

Lawrence Gene Hinkle
4510 106th Pl
Ocala, FL 34476

Life & Abey LLC
c/o Mary Ann Abey
5025 Maples Ferry Wy.
Evans, GA 30809

Linda Clutter
823 Laurel St
China Grove, NC 28023

Linda S Kaczmarczyk
905 Briarwood St
Morgantown, WV 26505

Linda Surock
525 Brierview Drive
Bridgeport, WV 26330

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Lindeana Bailey
133 Golden Eye Dr, Apt C
Daytona Beach, FL 32119

Lois J Dearth
206 Airport Rd NW
Warren, OH 44481

Mabel Brown
c/o Bonnie Williams
6198 Morrow Rossburg Rd
Morrow, OH 45152

Margery Ashbeck
133 Sunset Dr
Ronceverte, WV 24970

Marjorie Moss Smith
459 Vine St.
St Albans, WV 25177

Marjorie Neely
376 Neely Hollow Road
Jane Lew, WV 26378

Mark H Barbieri
1068 E Bradley Ave
el Cajon, CA 92021

Mary Ann Combs
73 Rt 1
Booneville, KY 41314

Mary Diane Boso
8412 LE Marie Ct
Denham Springs, LA 70706-1536

Mary Elizabeth Kennedy
12702 Pleasant Valley Drive
Mount Vernon, OH 43050

Mary Katherine Ott
766 Flower Dr
McGaheysville, VA 22840

Mary Kay Brant
3921 Dogwood St NW
Uniontown, PA 44685

Mary Thrash
515 E Main St.
Clarksburg, WV 26301

Mary V. Gabriel
RR 2 Box 180
Jane Lew, WV 26378

Michael F & Miriam Nardella
309 John St.
Clarksburg, WV 26301

Michael Gaston
PO Box 252
Lost Creek, WV 26385

Michael Phillips
34 Boyles St.
Grafton, WV 26354

Michael Ross
PO Box 397
Glenville, WV 26351

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Mike Ross Inc.
Center Street
Coalton, WV 26257

Mona Dorine Callahan
4615 Fawnbrook Cir
Raleigh, NC 27612

Nancy Ann Hughes
RR 1 Box 215-C
Jane Lew, WV 26378

Nancy Jean Bibbee Murphy
3575 Newberry Rd
Little Hocking, OH 45742

Naomi Ann Pieper
5511 Seaside Heights Dr.
Rancho Palos Verdes, CA 90275

Nathan L Morrison IV
512 Angelus St
Turlock, CA 95380

Neil Bailey
PO Box 395
West Milford, WV 26451

Patricia R. Davis
1407 Davisson Run Road
Clarksburg, WV 26301

Patricia Worden
2 Woodhaven Dr.
Laguna Niquel, CA 92677

Peggy Banish
PO Box 433
West Milford, WV 26451

Peggy Burfield
100 Brant Dr
Marietta, OH 45750

Penny Cox
84 Charles St
Elkton, MD 21921

PKL, LLC
c/o Kathryn Atha
119 Atha Dr
Bridgeport, WV 26330

Rebecca J Bray
211 North St
Bloomington, MD 21523

Reva Morrison
6 Emerald St
Melbourne, FL 32904

Richard Bailey
PO Box 2136
Honolulu, HI 96805

Richard Kelly
5843 Blackhawk Rd
Morrow, OH 45152

Richard Post Rapping
304 Kirk Circle
Madisonville, TN 37354

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Richards Resources
79 RR3
Salem, WV 26426

Robert "Bud" Hofer
C/O John Phillip Hofer
7383 Village Dr
Mason, OH 45040

Robert Gaston
14 Maple Ln
Bridgeport, WV 26330

Robert Max McDonald
97 Valley Ridge
Ojai, CA 96023

Robert W Riggs
PO Box 978
Fort Ashby, WV 26719

Robert W. Riechel Jr.
PO Box 1500
Santa Barbara, CA 93102

Roger Dale Young
1733 Monroe Rdg
Palestine, WV 26160

Ronald L Ellis
3482 Ivy Hill Cir #8
Cortland, OH 44410

Ronald O'Neal and Linda O'Neal
3 Willowbrook
Buchannon, WV 26201

Rosalee Pituch
1951 Treasure Lake
DuBois, PA 15801

Roxanne Rowh
1309 Pride Ave
Clarksburg, WV 26301

Ruth Ann Smith
706 Penn Ave
Lemont Furnace, PA 15456

Ruth Ann Wright
32113 RR 7
Fairmont, WV 26554

Ruth Justison
C/O Donna Lynn Miller
111 Burton Ave
Morrow, OH 45152

Sallie J. Waid
908 Oakland St
Harrisonburg, VA 22802

Sam Layfield Morrison
105 W High St Apt A,
Salem, WV 26426

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Sam Porter
2925 Pigeon Run RD SW
Massillon, OH 44647

Samuel Dwight & Burnice M Life
5025 Maples Ferry Way
Evans, GA 30809

Sharon Kay Frashuer Woolridge
7424 Winterleaf Ct
Richmond, VA 23234-2824

Sharyn Sims
78 Farfield Hts
LeRoy, WV 25252

Sherri L. Gaston
PO Box 302
Anmoore, WV 26323

Shirley A. Dibley
11208 Carrollwood Dr
Tampa, FL 33618

Stephen D Riggs
115 Carway Ln
Statesville, NC 28625

Susan Lawrence
109 Valley Dr
Bridgeport, WV 26330

Susan M. Young
2665 Misty Morning Ln.
Rosewell, GA 30076

Teresa D. Cole
943 Old Louisville
Louisville, KY 40372

Thomas E Bailey
915 Stone Lick Rd
Jane Lew, WV 26378

Timothy Gaston
4497 San Jose Ln
Columbus, OH 43213

Timothy House
10 Way St
Akron, OH 44310

Timothy Stephen Thomas
153 Peach Tree Ln
Washington, WV 26181

Tom Porter
40560 Hanover Ridge Rd
Jewett, OH 43986

Trustee, Auburn Baptist Church
11849 Auburn Road
Auburn, WV 26325

Urcle M Sheets Jr
8058 Kirkton Crt
Sacramento, CA 95828

Waco Oil and Gas Company
PO Box 397
Glenville, WV 26351

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Mineral Owners

Wesley Craft Brashear, Jr.
12205 Creek Point Dr.
Frisco, TX 750358

William C. White
#1 White Lane
Jane Lew, WV 26378

William Clark Kerns, II
William C Kerns
7245 Innsdale Ave. S
Cottage Grove, MN 55016

William G. Rapping
65 Meade St
Buckhanon, WV 26201

William L. Bailey
255 Grass Run Rd
Weston, WV 26452

William Michael McDonald
10637 Good Hope Pike
Jane Lew, WV 26378

William Morrison
115 Victoria Dr
Eatontown, NJ 07724

Zachary Donald Wolfe
17 Monongalia St
Buckhannon, WV 26201

Zelma Bailey
2820 Yankee Doodles Dr
Reynoldsburg, OH 43068

*HG Energy II Appalachia, LLC
5260 Dupont Road
Parkersburg, WV 26101

*Will Not Be Noticed Via Certified Mail

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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: 08/05/2019 **Date Permit Application Filed:** 08/15/2019

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

- HAND DELIVERY CERTIFIED MAIL RETURN RECEIPT REQUESTED

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

Notice is hereby provided to the SURFACE OWNER(s): * HG Energy II Appalachia LLC is not noticing self
Name: HG Energy II Appalachia, LLC Name: _____
Address: 5260 Dupont Road Address: _____
Parkersburg, WV 26101

Notice is hereby given:

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

State: West Virginia UTM NAD 83 Easting: 545445.7
County: Lewis Northing: 4331776.9
District: Freemans Creek Public Road Access: SR 1 / Hollick Run Rd
Quadrangle: West Millford WV 7.5' Generally used farm name: McDonald
Watershed: Middle West Fork Creek

This Notice Shall Include:

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

Notice is hereby given by:

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

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4704905701

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

Byrd E. White, III
Secretary of Transportation

August 6, 2019

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

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

Subject: DOH Permit for the McDonald 1211 Pad, Lewis County
N-5H Well site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #07-2019-0255 issued to HG Energy II Appalachia, LLC for access to the State Road for a well site located off Lewis County Route 1/1 SLS.

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

Very Truly Yours,

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

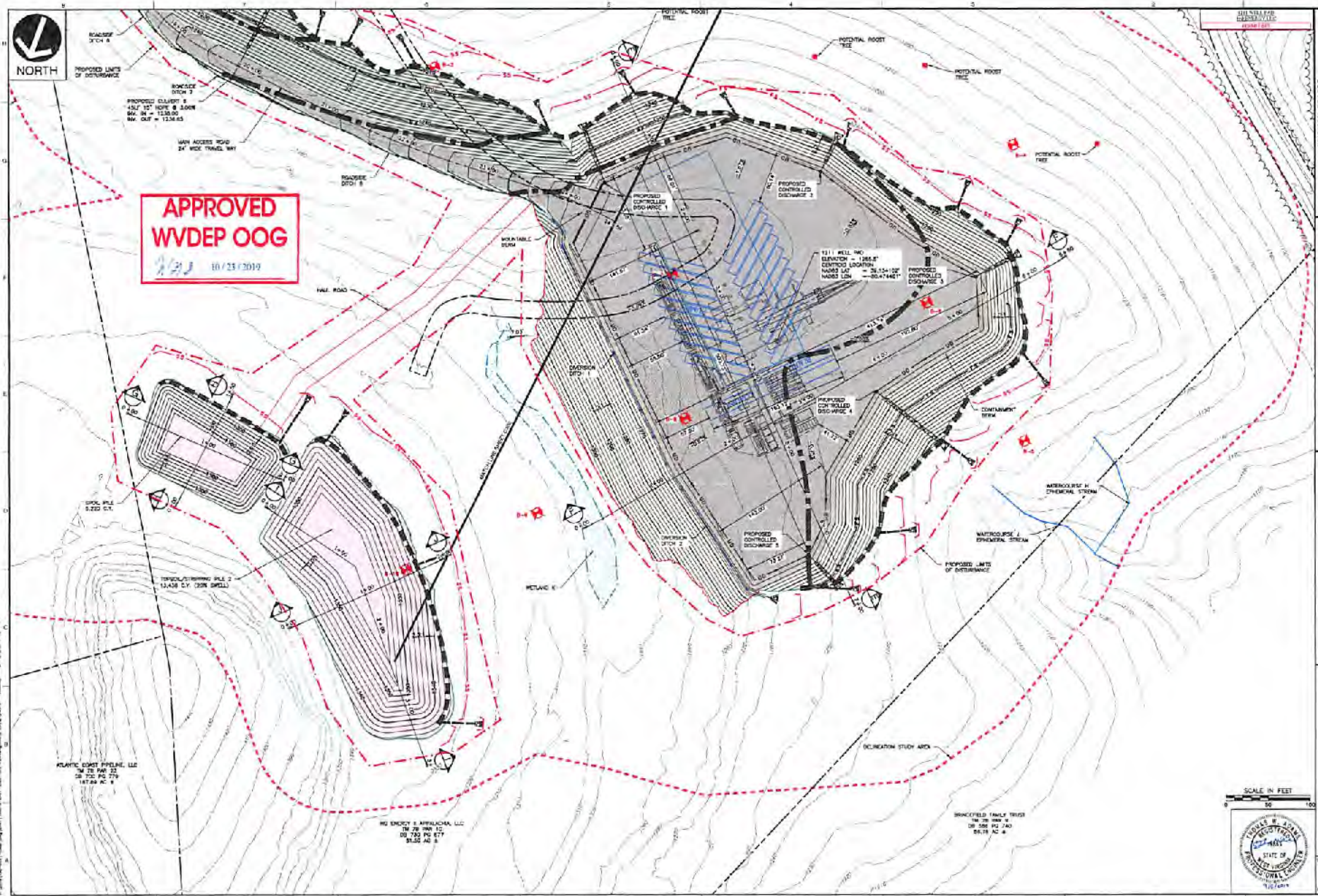
Cc: Diane C. White
HG Energy II, LLC
CH, OM, D-7
File

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List of Frac Additives by Chemical Name and CAS #**McDonald 1211 Well Pad (N-1H to N-5H, S-6H to S-10H)**

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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CEC
Civil & Environmental Consultants, Inc.
 900 Manassas Ave. Suite 200 - Bridgetown, WV 26036
 Phone: 304.623.3119 • Fax: 304.623.3327
 www.cecinc.com

HG ENERGY II APPALACHIA, LLC
 1211 WELL PAD
 FREEMANS CREEK DISTRICT
 LEWIS COUNTY,
 WEST VIRGINIA

SITE LAYOUT	
DATE	JUNE 2013
DESIGNED BY	
CHECKED BY	
SCALE	AS SHOWN
PROJECT NO.	
DRAWN BY	



C303
 SHEET 5 OF 15