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 west virginia department of environmental protection
 

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

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

Thursday, March 28, 2019  
 WELL WORK PERMIT  
 Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC  
 5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for 1209 S-7H  
 47-033-05943-00-00

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

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

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

James A. Martin  
 Chief

Operator's Well Number: 1209 S-7H  
 Farm Name: HG ENERGY II APPALACHIA  
 U.S. WELL NUMBER: 47-033-05943-00-00  
 Horizontal 6A New Drill  
 Date Issued: 3/28/2019

# 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.

## PERMIT CONDITIONS

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



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

4708005040  
03/29/2019

January 24, 2019

EnerVest Operating Company  
300 Capitol Street, Suite 200  
Charleston, WV 25301

RE: Area of Review – Nays 1209 Well Pad (S-7H to S-12H)  
Hydraulic Fracturing Notice

RECEIVED  
Office of Oil and Gas

FEB 05 2019

WV Department of  
Environmental Protection

Dear Sir:

HG Energy II Appalachia, LLC, has developed a Marcellus pad (Nays 1209 well pad) located in Harrison 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 6900' TVD) and existing conventional natural gas wells.

HG Energy anticipates conducting hydraulic fracturing of the Nays 1209 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 (Nays 1209 S laterals). A plat for the wells 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](mailto:dwhite@hgenergyllc.com). You may also contact the WV Office of Oil and Gas at 304-926-0444.

Sincerely,

*Diane White*

Diane White

Enclosure





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

03/29/2019

January 24, 2019

EQT Production Company  
115 Professional Place  
Bridgeport, WV 26330

RE: Area of Review – Nays 1209 Well Pad (S-7H to S-12H)  
Hydraulic Fracturing Notice

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HG Energy anticipates conducting hydraulic fracturing of the Nays 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 (Nays 1209 S Well Pad). A plat for the wells is attached.

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

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Sincerely,

*Diane White*

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Office of Oil and Gas

FEB 05 2019

WV Department of  
Environmental Protection



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

03/29/2019

January 24, 2019

Alliance Petroleum Corporation  
67 Collins Run Road  
Glenville, WV 26351

RE: Area of Review – Nays 1209 South Laterals/Well Pad (S-7H to S-12H)  
Hydraulic Fracturing Notice

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

03/29/2019

January 24, 2019

Ross & Wharton Gas Company  
29 Morton Avenue  
Buckhannon, WV 26201

RE: Area of Review – Nays 1209 Well Pad (S-7H to S-12H)  
Hydraulic Fracturing Notice

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Sincerely,

*Diane White*

Diane White

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WV Department of  
Environmental Protection



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

03/29/2019

January 24, 2019

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

RE: Area of Review – Nays 1209 Well Pad (S-7H to S-12H)  
Hydraulic Fracturing Notice

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

03/29/2019

January 24, 2019

Key Oil Company, Inc.  
4225 Nashville Road  
Franklin, KY 42134

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

03/29/2019

January 24, 2019

Alliance Petroleum Corporation  
67 Collins Run Road  
Glennville, WV 26351

RE: Area of Review – Nays 1209 South Laterals/Well Pad (S-7H to S-12H)  
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Diane White

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**PROPOSAL TO DRILL WITHIN DOMINION TRANSMISSION STORAGE FIELD**

03/29/2019

FIELD/ZONES: **DOMINION FINK/KENNEDY/LOST CREEK –GANTZ SAND**

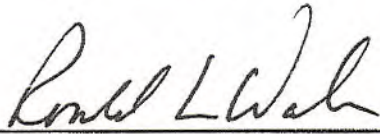
WELL NAME: **Nays 1209 S-7H**

Well # **Nays 1209 S-7H**

DISTRICT/COUNTY/STATE: **Union, Harrison, WV**


Submitted   
JOSH HINTON  
HG ENERGY, LLC

DATE 1-28-19

Approved 

DATE 1/30/2019

Dominion Energy Transmission

Approved 

DATE 1/31/2019

Dominion Energy Transmission

**Comments:**

HG Energy has submitted this Casing & Cementing diagram and Drilling Plan to Dominion Transmission for Review. This signed document acknowledges that Dominion has reviewed the proposed casing program and the well's location within the Fink/Kennedy/Lost Creek storage field. This acknowledgement also confirms the proposed casing program is accurate to the proper storage zone as provided by HG Energy, LLC

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FEB 05 2019  
WV Department of  
Environmental Protection





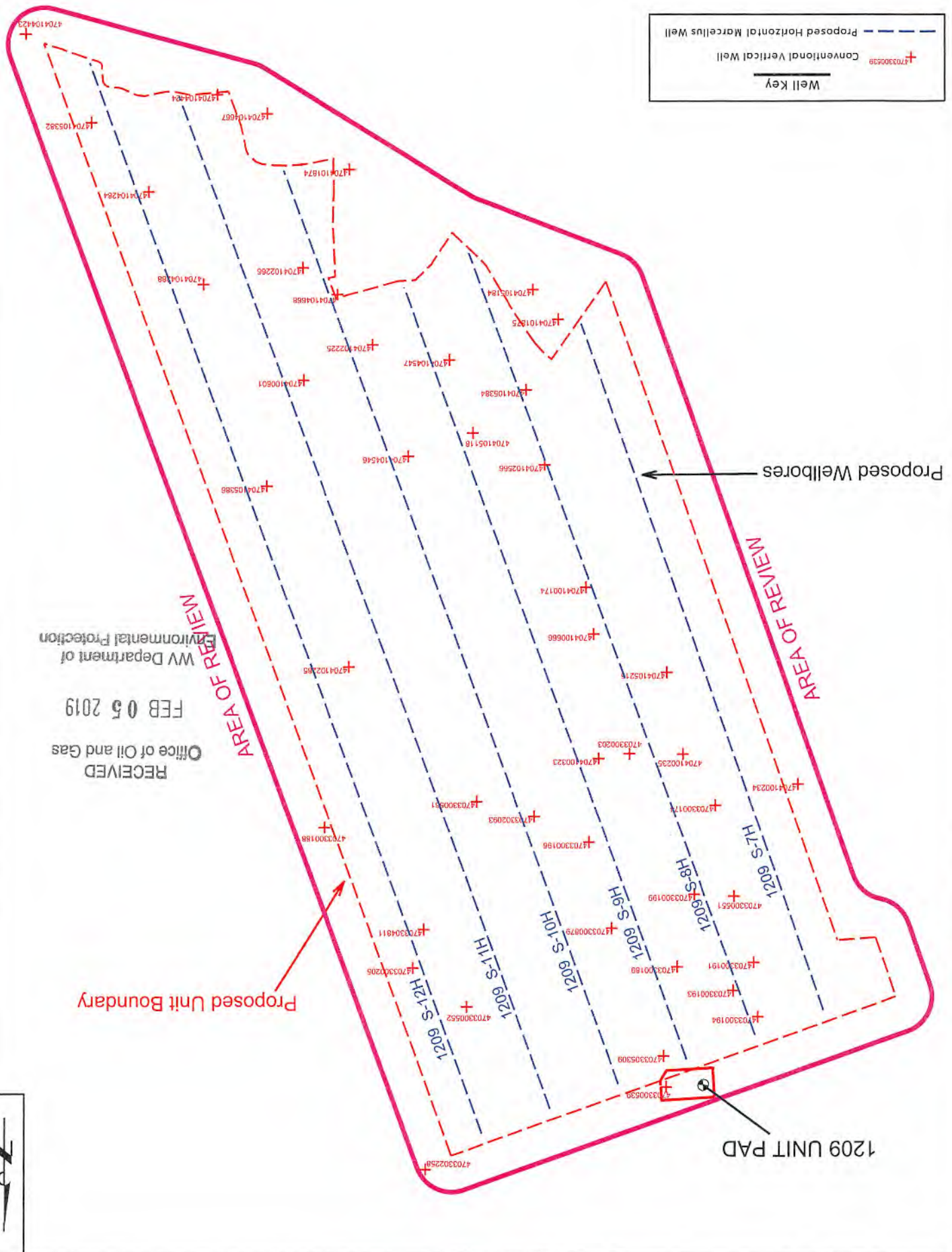
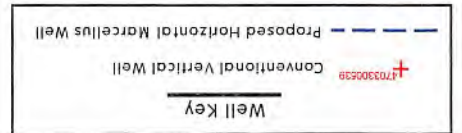
HG ENERGY, II APPALACHIA, LLC  
 5260 DuPont Road, Parkersburg, WV 26101  
 SCALE: 1" = 1,320'  
 1,320'  
 0  
 1/24/2019

Hackers Creek District, Harrison County, W.Va.  
 Union District, Harrison County, W.Va.  
 Proposed 1209 S-8H Proposed 1209 S-10H  
 Proposed 1209 S-7H Proposed 1209 S-9H  
 Proposed 1209 S-11H Proposed 1209 S-12H

6102/6/2019 1209 UNIT PAD

Area of Review for:

NOTE:  
 See Attached Spreadsheet for Well Data  
 DATA SOURCE  
 WGES Data Set - 2017; WVDOP Website



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 WV Department of Environmental Protection  
 FEB 05 2019



EXISTING WELLS 4,500' IN DEPTH OR GREATER:

**1209 UNIT SOUTH PAD AND PROPOSED WELLS S-7H, S-8H, S-9H, S-10H, S-11H & S-12H**

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4703304811	Harrison	Elizabeth Layman	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4499	ACTIVE	39.142105	-80.429888
2	4703300879	Harrison	Eric K & Susie G Decker	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4520	ACTIVE	39.142085	-80.439027
3	4704104547	Lewis	Ruth Turner	Alliance Petroleum Corp.	Greenland Gap Fm	Gas	4569	ACTIVE	39.120742	-80.431373
4	4704105382	Lewis	Charles D Cole II	Dominion Energy Transmission, Inc.	Brallier	Gas	4573	ACTIVE	39.111751	-80.414088
5	4704104546	Lewis	Ruth E Turner	Alliance Petroleum Corp.	Greenland Gap Fm	Gas	4609	ACTIVE	39.124367	-80.429326
6	4704104668	Lewis	John H Neely	Key Oil Co.	Elk	Gas w/ Oil Show	4870	ACTIVE	39.118277	-80.425974
7	4704104667	Lewis	James B/C Sumpter	Key Oil Co.	Greenland Gap Fm	Gas w/ Oil Show	4906	ACTIVE	39.111461	-80.422622

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WV Department of  
Environmental Protection



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Office of Oil and Gas  
FEB 05 2019  
Environmental Protection  
Department of

EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:  
**1209 UNIT SOUTH PAD AND PROPOSED WELLS S-7H, S-8H, S-9H, S-10H, S-11H & S-12H**

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4703300063	Harrison	J A Hardway	Dominion Energy Transmission, Inc.	Fifty-foot	Storage	1636	ACTIVE	39.150649	-80.444245
2	4703300174	Harrison	J M Simon	Dominion Energy Transmission, Inc.	Berea Ss	Storage	1635	ACTIVE	39.137511	-80.444118
3	4703300176	Harrison	J B Gusman	Dominion Energy Transmission, Inc.	Gantz	Storage	1542	ACTIVE	39.149066	-80.444789
4	4703300188	Harrison	H Neeley	Dominion Energy Transmission, Inc.	Gordon Stray	Storage	1928	ACTIVE	39.138239	-80.42509
5	4703300189	Harrison	J B Gusman	Dominion Energy Transmission, Inc.	Gordon Stray	Storage	1945	ACTIVE	39.143536	-80.442195
6	4703300191	Harrison	J Q Musser	Dominion Energy Transmission, Inc.	Gordon	Storage	1845	ACTIVE	39.143391	-80.445922
7	4703300193	Harrison	J G Musser	Dominion Energy Transmission, Inc.	Fifty-foot	Storage	1715	PLUGGED	39.144441	-80.444918
8	4703300194	Harrison	J A Hardway	Dominion Energy Transmission, Inc.	Gantz	Storage	1580	ACTIVE	39.145423	-80.446108
9	4703300196	Harrison	L D Reed	Dominion Energy Transmission, Inc.	Thirty-foot	Storage	2070	ACTIVE	39.138853	-80.437952
10	4703300199	Harrison	J K Musser	Dominion Energy Transmission, Inc.	Thirty-foot	Storage	1976	ACTIVE	39.14084	-80.443046
11	4703300203	Harrison	S L Casto 1	Dominion Energy Transmission, Inc.	Fifty-foot	Storage	2057	ACTIVE	39.135554	-80.439959
12	4703300205	Harrison	W L Hughes	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	1904	ACTIVE	39.143536	-80.429337
13	4703300539	Harrison	J B Gusman	Dominion Energy Transmission, Inc.	Benson	Gas	4115	ACTIVE	39.148035	-80.441636
14	4703300551	Harrison	Bonnie M Detamore	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4170	ACTIVE	39.140924	-80.44499
15	4703300552	Harrison	J B Gusman	Dominion Energy Transmission, Inc.	Benson	Gas	4220	ACTIVE	39.144988	-80.431946
16	4703300561	Harrison	Howard Neeley	Dominion Energy Transmission, Inc.	Benson	Gas	4431	ACTIVE	39.137295	-80.432505
17	4703300879	Harrison	Eric K & Susie G Decker	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4520	ACTIVE	39.142085	-80.439027
18	4703302093	Harrison	Howard Neeley	Dominion Energy Transmission, Inc.	Gordon	Storage	2374	ACTIVE	39.137877	-80.4353
19	4703302258	Harrison	J B Gusman	Dominion Energy Transmission, Inc.	UNKNOWN	Storage	1759	ACTIVE	39.151084	-80.429896
20	4703304641	Harrison	William B Ferrell Jr	Dominion Energy Transmission, Inc.	Benson	Gas	4264	ACTIVE	39.151966	-80.43734
21	4703304811	Harrison	Elizabeth Layman	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4499	ACTIVE	39.142105	-80.429888
22	4703305309	Harrison	Nays Riverbend Farm Inc	Dominion Energy Transmission, Inc.	Weir	Gas	1405	ACTIVE	39.146873	-80.441525
23	4704100174	Lewis	Alba V Hitt 1	Dominion Energy Transmission, Inc.	Up Devonian	Gas	4145	ACTIVE	39.129313	-80.437909
24	4704100234	Lewis	R A Beeghley	Dominion Energy Transmission, Inc.	Gantz	Storage	1742	ACTIVE	39.136739	-80.448136
25	4704100235	Lewis	Rosa Musser	Dominion Energy Transmission, Inc.	Gantz	Storage	4500	ACTIVE	39.135579	-80.442549
26	4704100323	Lewis	S G Hall	Dominion Energy Transmission, Inc.	Gantz	Storage	1760	ACTIVE	39.135724	-80.438452
27	4704100601	Lewis	Isaac Jackson	Dominion Energy Transmission, Inc.	Benson	Gas	4357	ACTIVE	39.121463	-80.424285
28	4704100666	Lewis	Nora Walker	UNKNOWN	Gantz	Storage	1589	ABANDONED	39.131084	-80.438265
29	4704101874	Lewis	M D Walker 5	Alliance Petroleum Corp.	Benson	Gas	4305	ACTIVE	39.113583	-80.426591
30	4704101875	Lewis	M D Walker 6	EQT Production Co.	Benson	Gas	4262	ACTIVE	39.119259	-80.436687
31	4704102225	Lewis	Howard Neely	Alliance Petroleum Corp.	Hampshire Grp	Gas	2484	ACTIVE	39.120162	-80.427649
32	4704102266	Lewis	F Colvin	Alliance Petroleum Corp.	Fifth Sand	Gas	2286	ACTIVE	39.117262	-80.424298



33	4704102285	Lewis	H Bailey	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4140	ACTIVE	39.132244	-80.426348
34	4704102566	Lewis	J H Bailey	Enervest Operating, LLC	Benson	Gas	4254	ACTIVE	39.12472	-80.435962
35	4704104284	Lewis	Charles D Cole 1	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4322	ACTIVE	39.114361	-80.416852
36	4704104288	Lewis	Charles D Cole II 2	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4473	ACTIVE	39.117842	-80.419458
37	4704104423	Lewis	James Winemiller	Ross & Wharton Gas Co.	UNKNOWN	UNKNOWN	-	PLUGGED	39.108416	-80.410922
38	4704104424	Lewis	Roy C Bargerhuff	Ross & Wharton Gas Co.	UNKNOWN	UNKNOWN	4085	PLUGGED	39.110736	-80.420202
39	4704104546	Lewis	Ruth E Turner	Alliance Petroleum Corp.	Greenland Gap Fm	Gas	4609	ACTIVE	39.124367	-80.429326
40	4704104547	Lewis	Ruth Turner	Alliance Petroleum Corp.	Greenland Gap Fm	Gas	4569	ACTIVE	39.120742	-80.431373
41	4704104667	Lewis	James B/C Sumpter	Key Oil Co.	Greenland Gap Fm	Gas w/ Oil Show	4906	ACTIVE	39.111461	-80.422622
42	4704104668	Lewis	John H Neely	Key Oil Co.	Elk	Gas w/ Oil Show	4870	ACTIVE	39.118277	-80.425974
43	4704105118	Lewis	Kevin B/Sherrri K Jerden	Berry Energy, Inc.	Benson	Gas	4389	ACTIVE	39.123497	-80.432491
44	4704105184	Lewis	Donald E & Glenna Linger	Berry Energy, Inc.	Greenland Gap Fm	Gas	4409	ACTIVE	39.118132	-80.435468
45	4704105215	Lewis	Lee Stalnaker	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4309	ACTIVE	39.132534	-80.441803
46	4704105382	Lewis	Charles D Cole II	Dominion Energy Transmission, Inc.	Brallier	Gas	4573	ACTIVE	39.111751	-80.414088
47	4704105384	Lewis	Kevin B & Sherrri K Jerden	Berry Energy, Inc.	Benson	Gas	4390	ACTIVE	39.121902	-80.435097
48	4704105386	Lewis	Walter Neely Jr Trust	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	3442	ACTIVE	39.125428	-80.422437

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WW-6B  
(04/15)

4703305943  
03/29/2019  
API NO. 47- \_\_\_\_\_  
OPERATOR WELL NO. Nays 1209 S-7H  
Well Pad Name: Nays 1209

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.

<u>494519932</u>	<u>Harrison</u>	<u>Union</u>	<u>West Milford 7.5'</u>
Operator ID	County	District	Quadrangle

2) Operator's Well Number: Nays 1209 S-7H Well Pad Name: Nays 1209

3) Farm Name/Surface Owner: Nays / HG Energy II Appalachia Public Road Access: Kincheloe Run Rd/SLS 35

4) Elevation, current ground: 1002' Elevation, proposed post-construction: 1007'

5) Well Type (a) Gas  Oil  Underground Storage

Other \_\_\_\_\_

(b) If Gas Shallow  Deep

Horizontal

*SDW  
1/28/2019*

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus at 6863'/6914' and 51' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6900'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 17,740'

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11) Proposed Horizontal Leg Length: 9941'

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12) Approximate Fresh Water Strata Depths: 135', 500'

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

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14) Approximate Saltwater Depths: None noted in offsets

15) Approximate Coal Seam Depths: 660' to 665'

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

(a) If Yes, provide Mine Info: Name: \_\_\_\_\_

Depth: \_\_\_\_\_

Seam: \_\_\_\_\_

Owner: \_\_\_\_\_

WW-6B  
(04/15)

API NO. 47- \_\_\_\_\_  
 OPERATOR WELL NO. Nays 1209 S-7H  
 Well Pad Name: Nays 1209

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	100'	100'	Drilled In
Fresh Water	20"	NEW	J-55	94	600'	600'	40% excess yield = 1.20, CTS
Coal	13 3/8"	NEW	J-55	68	1735'	1735'	40% excess yield = 1.20, CTS
Intermediate	9 5/8"	NEW	J-55	40	2500'	2500'	40% excess yield = 1.20, CTS
Production	5 1/2"	NEW	P-110	23	17740'	17740'	20% excess yield = 1.19, test yield = 1.00
Tubing							
Liners							

SDW  
2/1/2019

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				CTS
Fresh Water	20"	24"	.438	2110	1200	Type 1, Class A	30 % excess yield = 1.20, CTS
Coal	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	40% excess yield = 1.20, CTS
Intermediate	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	40% excess yield = 1.20, CTS
Production	5 1/2"	8 1/2"	.415	14520	12500	Type 1/Class A	20% excess yield = 1.19, test yield = 1.00
Tubing							
Liners							

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**PACKERS**

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Kind:					WV Department of Environmental Protection
Sizes:					
Depths Set:					



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

Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6900 feet. Drill horizontal leg to estimated 9941 TMD, stimulate and be capable of producing from the Marcellus Formation. Should we encounter an unanticipated void in the coal, we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface.

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

The stimulation will be 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): 16.148 acres

22) Area to be disturbed for well pad only, less access road (acres): 10.834 acres

23) Describe centralizer placement for each casing string:

No centralizers will be used with conductor casing.  
Freshwater - centralized every 3 joints to surface.  
Coal - Bow Spring on every joint.  
Intermediate - 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 - 15.8 ppg PNE-1 + 3% bwoc CaCl, 40% Excess Yield = 1.20, CTS  
Coal - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl, 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl, zero% Excess, CTS  
Intermediate - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl, 40% Excess, Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl, zero% Excess, CTS  
Production - 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 MPA17020% Excess/Lead Yield=1.19/Tail Yield=1.94, CTS

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25) Proposed borehole conditioning procedures:

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

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\*Note: Attach additional sheets as needed.



1209 S-7H  
Marcellus Shale Horizontal  
Harrison County, WV

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		1209 S-7H SHL				237394.2N 1732702.59E					
Ground Elevation		1007'				1209 S-7H LP				236382.18N 1730709.19E	
Azimuth		160.752°				1209 S-7H BHL				226957.93N 1733871.91E	

WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
	30"	30" 157.5# LS	Conductor	0	100	AIR	N/A, Casing to be drilled in w/ Dual Rotary Rig	N/A	Ensure the hole is clean at TD.	Conductor casing = 0.5" wall thickness
	24"	20" 94# J-55	Fresh Water	0	135	AIR	15.6 ppg PNE-1 + 3% bwoc CaCl 40% Excess Yield=1.20 / CTS	Centralized every 3 joints to surface	Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.	Surface casing = 0.438" wall thickness Burst=2110 psi
			Fresh Water	0	600					
	17.5"	13-3/8" 68# J-55 BTC	Kittanning Coal	660	665	AIR / KCL - Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on every joint <i>*will also be running ECP for isolating storage zone*</i>	Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.480" wall thickness Burst=3450 psi
			Little/Big Lime	1126 / 1167	1151 / 1243					
			Injun / Gantz (Storage)	1243 / 1535	1349 / 1585					
			Intermediate 1	0	1735					
	12.25"	9-5/8" 40# J-55 BTC	Fifty / Thirty Foot	1650 / 1730	1697 / 1742	AIR / KCL - Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on first 2 joints then every third joint to 100' form surface	Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.395" wall thickness Burst=3950 psi
			Gordon Stray / Gordon	1785 / 1850	1850 / 1940					
			5th Sand	2035	2070					
			Bayard Sand	2125	2160					
	8.5" Vertical	5-1/2" 23# P-110 HC CDC HTQ	Speechley	2745	2763	9.0ppg SOBMM	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	Run 1 spiral centralizer every 5 joints from the top of the curve to surface.	Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.415" wall thickness Burst=14520 psi Note: Actual centralizer schedules may be changed due to hole conditions
			Balltown	2965	3005					
			Benson	4050	4083					
			West Falls	4620	5865					
Rhinestreet			5865	6140						
8.5" Curve			5-1/2" 23# P-110 HC CDC HTQ	Cashaqua	6140	6341		11.5ppg-12.5ppg SOBMM		
				Middlesex	6341	6421				
				West River	6421	6514				
				Burkett	6514	6540				
				Tully Limestone	6540	6644				
8.5" Lateral	5-1/2" 23# P-110 HC CDC HTQ	Hamilton	6644	6863	11.5ppg-12.5ppg SOBMM					
		Marcellus	6863	6914						
		TMD / TVD (Production)	17740	6900						
			Onondaga	6914						

LP @ 6900' TVD / 7799' MD

8.5" Hole - Cemented Long String  
5-1/2" 23# P-110 HC CDC HTQ

+/-9941' ft Lateral

TD @ +/-6900' TVD  
+/-17740' MD

X=centralizers



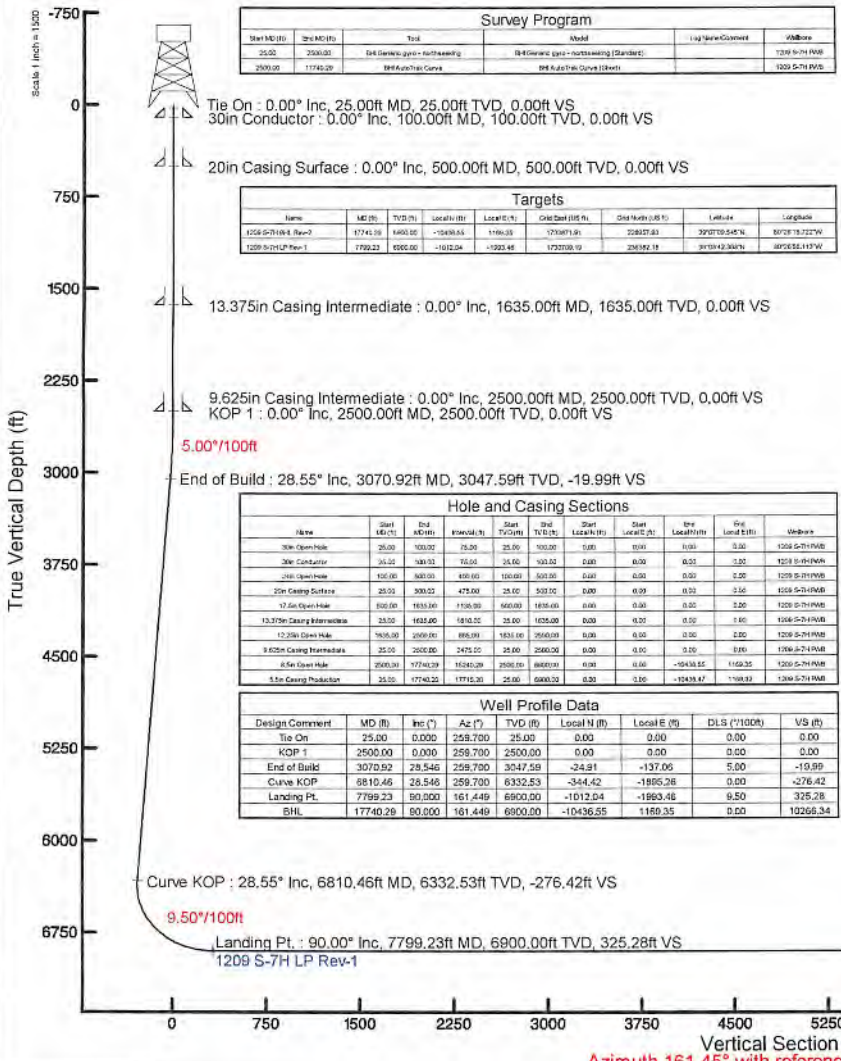
# HG ENERGY

Location: Harrison County, WV  
 Field: Harrison (NAD27 SP Northern Zone 4701)  
 Facility: 1209 Pad

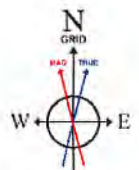
Slot: Slot #07  
 Well: 1209 S-7H  
 Wellbore: 1209 S-7H PWB

<b>Plot reference wellbore is 1209 S-7H PWB Ex-01</b>		Data System: NAD27 (Lancaster West Virginia SP, Northern Zone 4701) US feet	
True wellbore depths are referenced to Paterson 347 (RKB)		North Reference: Grid North	
Measured depths are referenced to Paterson 347 (RKB)		Scale: True distance	
Paterson 347 (RKB) Mean Sea Level: 1032 feet		Depths are in feet	
Mean Sea Level to Mud line (At Slot: Slot #07): +1027 feet		Created by: Jadedation 2018-10-19	
Coordinates are in feet referenced to Slot		Database: WVA_MPL_External_US_Coef	

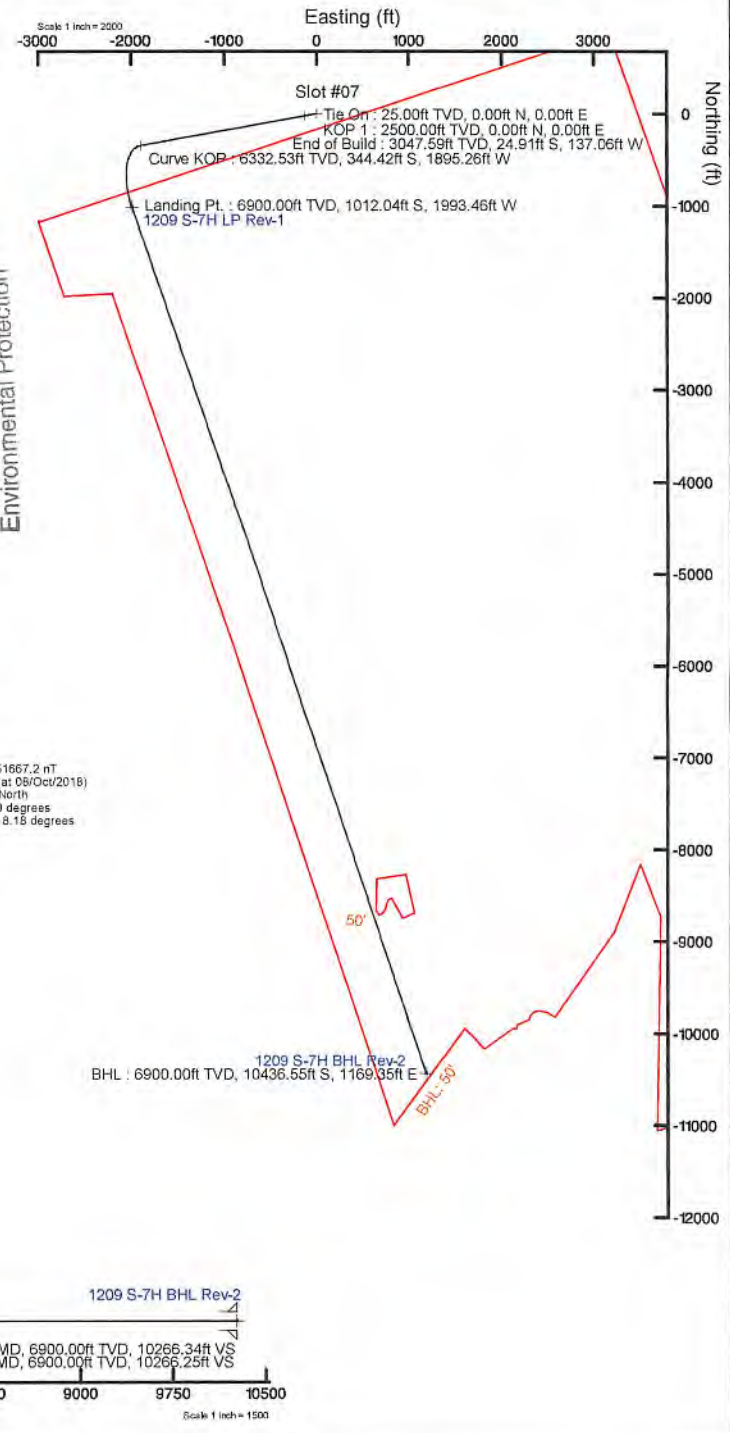
Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
1209 Pad	1732374.000	237349.950	39°08'52.102"N	80°28'37.112"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot #07	44.25	328.80	1732702.590	237394.200	39°08'52.573"N
Paterson 347 (RKB) to Mud line (At Slot: Slot #07): <b>25ft</b>					
Mean Sea Level to Mud line (At Slot: Slot #07): <b>-1007ft</b>					
Paterson 347 (RKB) to Mean Sea Level: <b>1032ft</b>					



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BGGM (1900.0 to 2020.0) Dip: 66.20° Field: 51867.2 nT  
 Magnetic North is 8.78 degrees West of True North (at 05/Oct/2018)  
 Grid North is 0.50 degrees West of True North  
 To correct azimuth from True to Grid add 0.50 degrees  
 To correct azimuth from Magnetic to Grid subtract 8.18 degrees



Vertical Section (ft)  
 Azimuth 161.45° with reference 0.00 N, 0.00 E



Nays 1209 Well Pad (N-1H to N-6H, S-7H to S-12H)  
Cement Additives

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

**List of Frac Additives by Chemical Name and CAS #**RECEIVED  
Office of Oil and Gas**Nays 1209 Well Pad (N-1H to N-6H, S-7H to S-12H)**

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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	



WW-9  
(4/16)

03/29/2019

API Number 47 - \_\_\_\_\_ - \_\_\_\_\_  
Operator's Well No. Nays 1209 S-7H

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

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FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name HG Energy II Appalachia, LLC OP Code 494501907 FEB 05 2019

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

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

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 drilling 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. Air, Freshwater and SOB M

-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 List

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

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

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

Company Official Signature Diane White

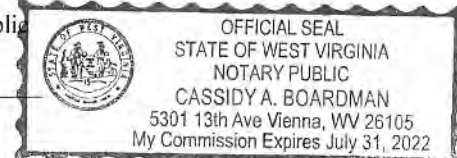
Company Official (Typed Name) Diane White

Company Official Title Agent

Subscribed and sworn before me this 23rd day of January, 20 19

Cassidy A. Boardman Notary Public

My commission expires 7/31/2022





**HG Energy II Appalachia, LLC**

Proposed Revegetation Treatment: Acres Disturbed 16.148 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

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Seed Mixtures

**Temporary**

**Permanent**

Seed Type	lbs/acre
Tall Fescue	40
Ladino Clover	5

Seed Type	lbs/acre
Tall Fescue	40
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: \_\_\_\_\_

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

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

Title: Harrison County DEP Oil & Gas Inspector Date: \_\_\_\_\_

Field Reviewed? ( ) Yes ( ) No

# Cuttings Disposal/Site Water

## Cuttings -Haul off Company:

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

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

Environmental Coordination Services & Recycling (ECS&R)  
8287 US Highway 18  
Cochranon, PA 16314  
814-425-7778

## Disposal Locations:

Apex Environmental, LLC Permit # 06-08488  
11 County Road 78  
Amsterdam, OH 43908  
740-548-4889

Westmoreland Waste, LLC Permit # 100277  
111 Conner Lane  
Belle Vernon, PA 15012  
724-929-7684

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 / 301071  
233 Max Lane  
Yukon, PA 25968  
724-722-3500

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

Waste Management Kelly Run Permit # 100663  
1801 Park Side Drive  
Elizabeth, PA 15037  
412-384-7569

Waste Management South Hills (Arnold) Permit # 100582  
3100 Hill Road  
Library, PA 15129  
724-348-7013  
412-384-7569

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

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

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

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Wetzel County Landfill Permit # SWF-1021-97 / WV 0109185  
Rt 1, Box 158A  
New Martinsville, WV 26035  
804-455-3800

03/29/2019

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

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

Northern A-1 Environmental Services Permit ID MIP020906814  
3947 US 131 North, PO Box 1030  
Kalkaska, MI 49646  
231-258-9961

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**Water Haul off Companies:**

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

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

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

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

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

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

Nuverra Environmental Solutions  
11942 Veterans Memorial Highway  
Masontown, WV 26542

Equipment Transport  
1 Tyler Court  
Carlisle, PA 17015

Mustang Oilfield Services LLC  
PO Box 789  
St. Clairsville, OH 43950

Myers Well Service, \_\_\_\_\_  
2001 Ballpark Court  
Export, PA 15622

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

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

**Disposal Locations:**

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

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

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

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

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

Kernle 1-D Well  
Permit # 8780  
7675 East Pike  
Norwich, OH 43767  
614-648-8898  
740-786-6485



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

Goff SWD #1 (SWIW # 27)  
Permit # 34-119-2-8776-000  
300 Cherrington Pkwy, Suite 200  
Coraopolis, PA 15108  
412-829-7276

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

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

OH UIC #1 Buckeye UIC Barnesville 1 & 2  
CNX Gas Company, LLC  
1000 Consol Energy Drive  
Permit # 34-013-2-0609-00-00  
Permit # 34-013-2-0614-00-00  
304-823-6568

US Steele 11385  
Permit # 47-001-00561  
200 Evergreen Drive  
Waynesburg, PA 15780  
304-823-6568

Chapin #7 UIC (SWIW #7)  
Permit # 34-083-2-4187-00-00  
Elkhead Gas & Oil Company  
12188 Marne Rd. NE  
Newark, OH 43055  
740-763-3966

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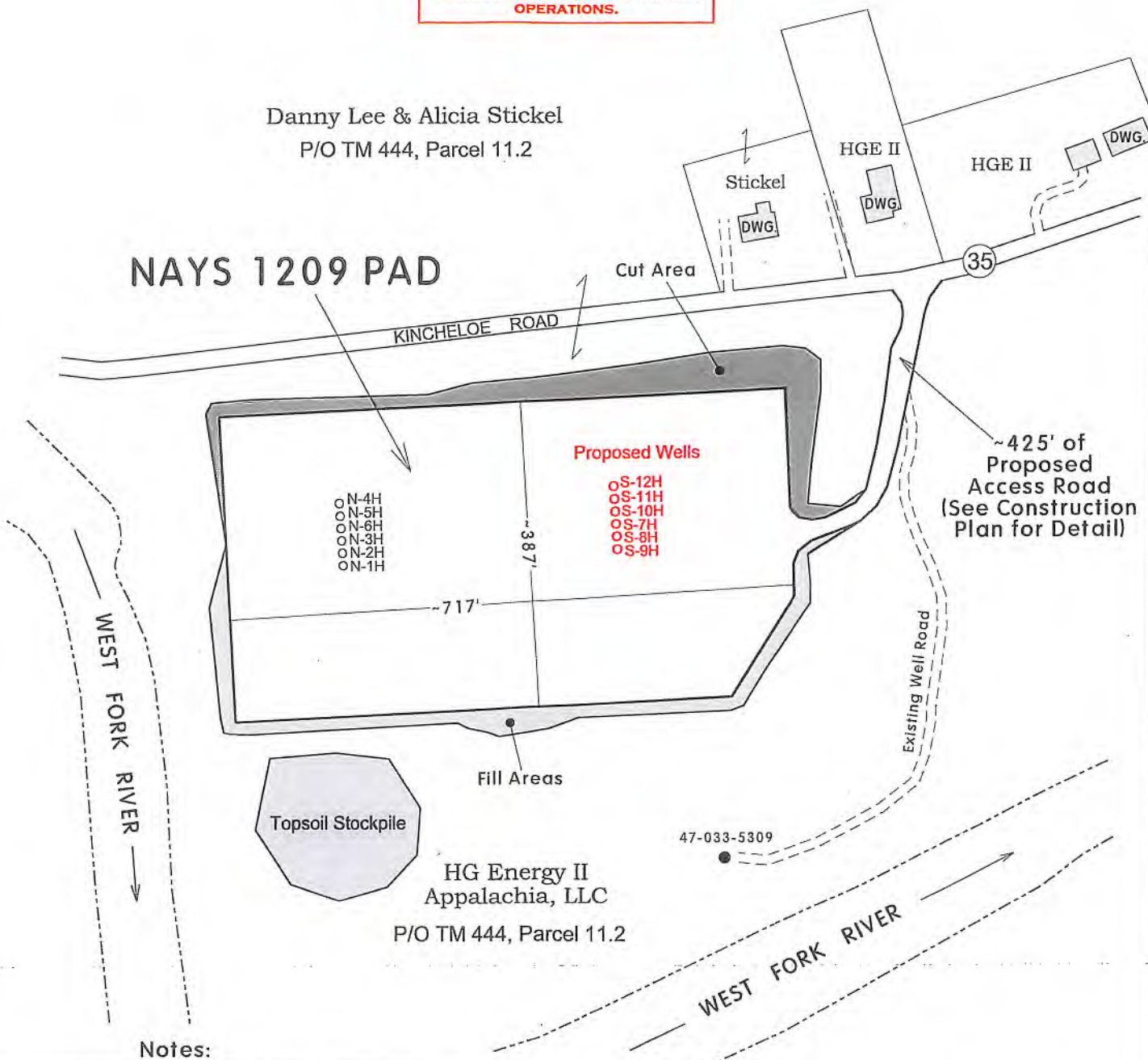
Reclamation Plan For:  
**NAYS 1209 PAD**

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



Danny Lee & Alicia Stickel  
 P/O TM 444, Parcel 11.2

**NAYS 1209 PAD**



Notes:

- REQUESTED PERMIT IS FOR DRILLING NEW HORIZONTAL WELL.
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- DRAWING NOT TO SCALE.

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# HG ENERGY

Location: Harrison County, WV Slot: Slot #07  
 Field: Harrison (NAD27 SP Northern Zone 4701) Well: 1209 S-7H  
 Facility: 1209 Pad Wellbore: 1209 S-7H FWB

Plot reference datum is 1201 S-7H PWP (5-21)  
 True vertical depths are referenced to Patterson 347 (RKB)  
 Measured depths are referenced to Patterson 347 (RKB)  
 Patterson 347 (RKB) to Mean Sea Level: 1032 feet  
 Mean Sea Level to Mud Line (Slot #07): -1037 feet  
 Coordinates are in feet unless noted as follows

### Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
1209 Pad	1732374.000	237349.950	39°08'52.102"N	80°28'37.112"W		
Slot Name	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot #07	44.25	228.00	1732372.550	237349.300	39°08'52.573"N	80°28'32.847"W
Slot #01	0.00	0.00	1732374.000	237349.950	39°08'52.102"N	80°28'37.112"W
Slot #22	15.02	-0.45	1732373.550	237364.870	39°08'52.250"N	80°28'37.119"W
Slot #03	29.83	-1.11	1732372.880	237379.880	39°08'52.257"N	80°28'37.130"W
Slot #04	74.79	-3.16	1732370.840	237424.740	39°08'52.840"N	80°28'37.162"W
Slot #05	80.77	-2.51	1732371.490	237403.720	39°08'52.692"N	80°28'37.162"W
Slot #06	44.83	-1.76	1732372.240	237394.800	39°08'52.545"N	80°28'37.140"W
Slot #09	29.33	379.36	1732370.540	237470.260	39°08'52.437"N	80°28'32.835"W
Slot #10	14.02	329.76	1732369.690	237363.070	39°08'52.274"N	80°28'32.829"W
Slot #10	59.27	327.95	1732370.540	237406.220	39°08'52.721"N	80°28'32.657"W
Slot #11	74.19	327.20	1732370.150	237424.140	39°08'52.889"N	80°28'32.569"W
Slot #12	89.11	326.65	1732370.540	237438.060	39°08'53.019"N	80°28'32.575"W

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
KSTS Pad	1724065.200	245700.600	39°10'13.760"N	80°28'23.220"W		
Slot Name	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot #01	75.83	25.63	1724090.800	245778.400	39°10'14.512"N	80°28'23.403"W
Slot #04	19.00	6.40	1724071.600	245719.600	39°10'13.949"N	80°28'23.641"W
Slot #05	56.00	19.30	1724064.400	245767.000	39°10'14.323"N	80°28'23.484"W

### Well Data

Slot	Well	Wellbore	Wellbore
Slot #01	1209 S-1H	1209 S-1H FWB	1209 S-1H PWP Ex-01
Slot #01	KSTS4HS STD1	KSTS4HS STD1 AWB	KSTS4HS STD1 AWP Proj: 18211'
Slot #02	1209 S-2H	1209 S-2H FWB	1209 S-2H PWP Ex-01
Slot #03	1209 S-3H	1209 S-3H FWB	1209 S-3H PWP Ex-01
Slot #04	1209 S-4H	1209 S-4H FWB	1209 S-4H PWP Ex-03
Slot #04	KSTS4HS	KSTS4HS STD1 AWB	KSTS4HS STD1 AWP Proj: 18308'
Slot #05	1209 S-5H	1209 S-5H FWB	1209 S-5H PWP Ex-01
Slot #05	KSTS4HS	KSTS4HS AWB	KSTS4HS AWP Proj: 17540'
Slot #06	1209 S-6H	1209 S-6H FWB	1209 S-6H PWP Ex-01
Slot #07	1209 S-7H	1209 S-7H FWB	1209 S-7H PWP Ex-01
Slot #08	1209 S-8H	1209 S-8H FWB	1209 S-8H PWP Ex-01
Slot #09	1209 S-9H	1209 S-9H FWB	1209 S-9H PWP Ex-01
Slot #10	1209 S-10H	1209 S-10H FWB	1209 S-10H PWP Ex-01
Slot #11	1209 S-11H	1209 S-11H FWB	1209 S-11H PWP Ex-00
Slot #12	1209 S-12H	1209 S-12H FWB	1209 S-12H PWP Ex-00



ASCE 10-10-10 is 100% Compliant with ASCE 10-10-10  
 and all other applicable codes and standards  
 CAD Model is 3D Model of the Well  
 Drawings are based on the 3D Model  
 To correct errors from Wellbore to Grid values 0.1M Approx



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# Reclamation Plan For: NAYS 1209 PAD

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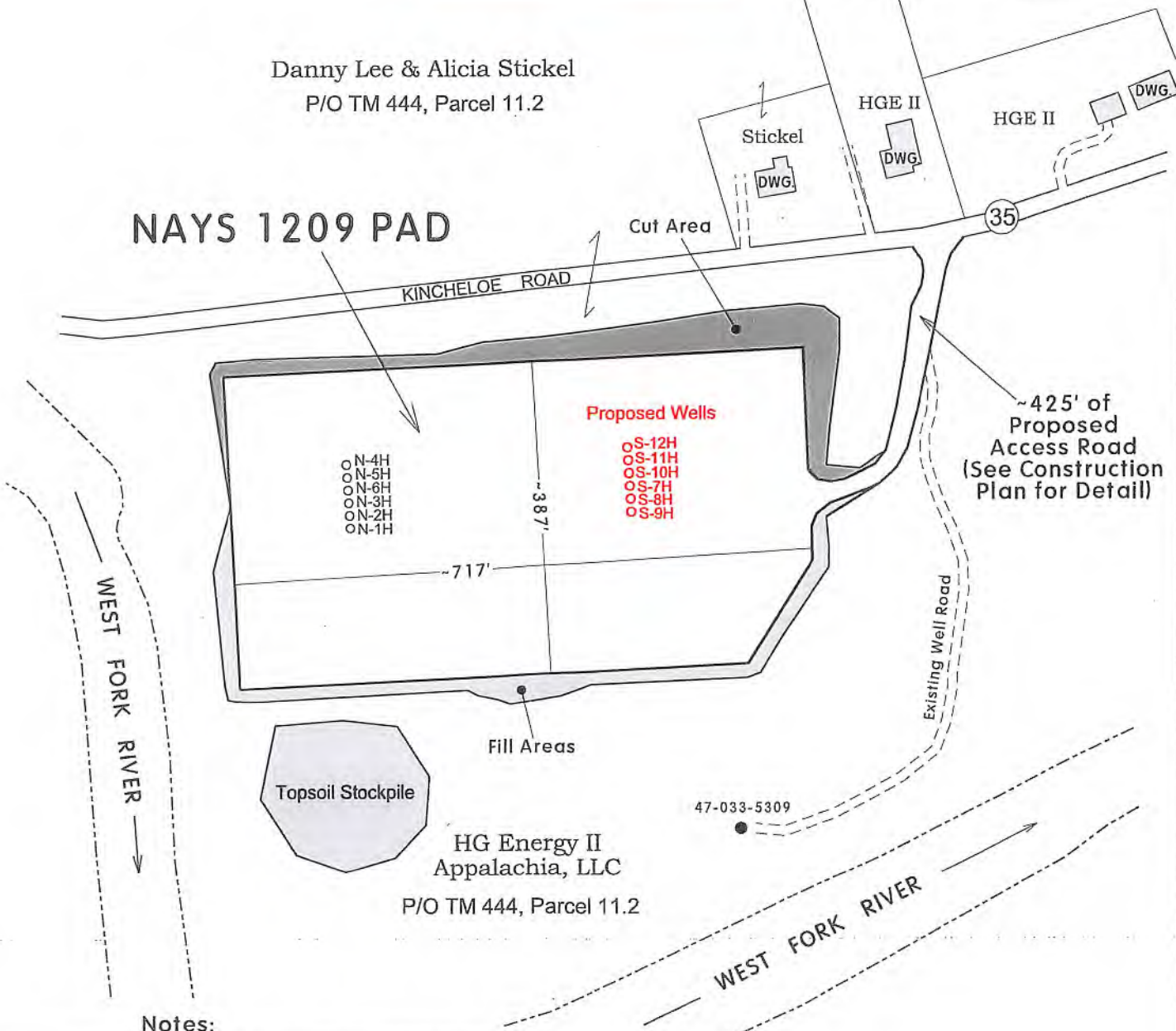


**NOTE**  
REFER TO THE WVDEP  
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OPERATIONS.

Danny Lee & Alicia Stickel  
P/O TM 444, Parcel 11.2

WV Department of  
Environmental Protection

## NAYS 1209 PAD



WEST FORK RIVER

~425' of  
Proposed  
Access Road  
(See Construction  
Plan for Detail)

ON-4H  
ON-5H  
ON-6H  
ON-3H  
ON-2H  
ON-1H

Proposed Wells  
OS-12H  
OS-11H  
OS-10H  
OS-7H  
OS-8H  
OS-9H

Fill Areas

Topsoil Stockpile

HG Energy II  
Appalachia, LLC  
P/O TM 444, Parcel 11.2

47-033-5309

WEST FORK RIVER

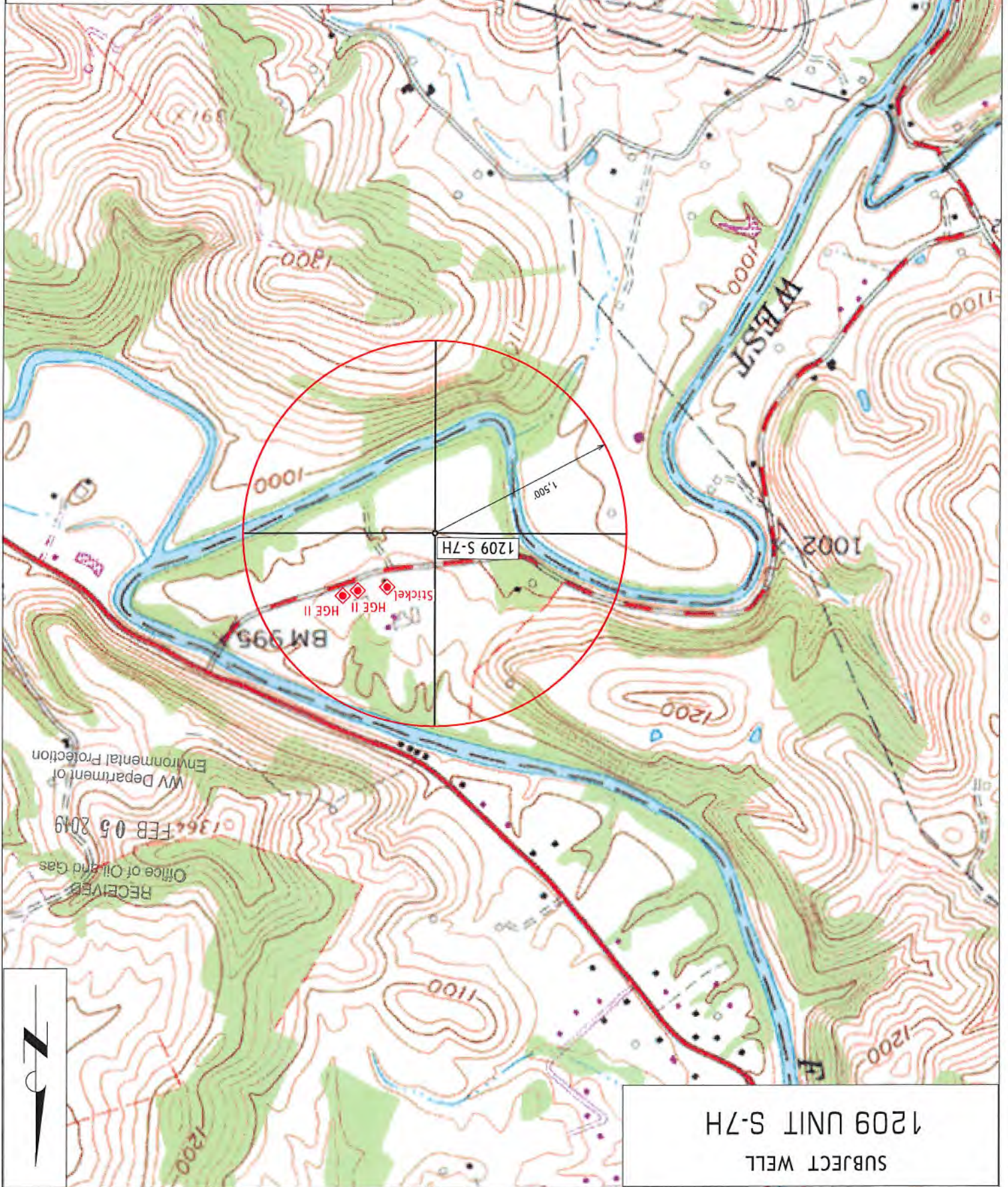
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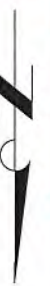


Section of  
West Milford 7.5' Quadrangle  
SCALE 1"=1000'

Denotes Possible  
Water Supply Source  
03/29/2019



SUBJECT WELL  
1209 UNIT S-7H



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WV Department of Environmental Protection  
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03/29/2019

# HG Energy II Appalachia, LLC

## Site Safety Plan

1209 Unit Well Pad  
327 Gooseman Rd Jane Lew  
Harrison County, WV 26378

May 2018: Version 2

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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*S.Ow*  
*1/28/2019*





1209 S-7H  
Marcellus Shale Horizontal  
Harrison County, WV

				1209 S-7H SHL				237394.2N 1732702.59E			
Ground Elevation		1007'		1209 S-7H LP				236382.18N 1730709.19E			
Azim		160.752°		1209 S-7H BHL				226957.93N 1733871.91E			
WELLBORE DIAGRAM		HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
	30"	30" 157.5# LS	Conductor	0	100	AIR	N/A, Casing to be drilled in w/ Dual Rotary Rig	N/A	N/A	Ensure the hole is clean at TD.	Conductor casing = 0.5" wall thickness
	24"	20" 94# J-55	Fresh Water	0	135	AIR	15.6 ppg PNE-1 + 3% bwoc CaCl 40% Excess Yield=1.20 / CTS	Centralized every 3 joints to surface	Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.	Surface casing = 0.438" wall thickness Burst=2110 psi	
			Fresh Water	0	600						
	17.5"	13-3/8" 68# J-55 BTC	Kittanning Coal	660	665	AIR / KCL Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on every joint <i>*will also be running ECP for isolating storage zone*</i>	Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.480" wall thickness Burst=3450 psi	
			Little/Big Lime	1126 / 1167	1151 / 1243						
			Injun / Gantz (Storage)	1243 / 1535	1349 / 1585						
			Intermediate 1	0	1735						
	12.25"	9-5/8" 40# J-55 BTC	Fifty / Thirty Foot	1650 / 1730	1697 / 1742	AIR / KCL Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on first 2 joints then every third joint to 100' form surface	Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.395" wall thickness Burst=3950 psi	
			Gordon Stray / Gordon	1785 / 1850	1850 / 1940						
			5th Sand	2035	2070						
			Bayard Sand	2125	2160						
			Intermediate 2	0	2500						
8.5" Vertical	5-1/2" 23# P-110 HC CDC HTQ	Speechley	2745	2763	9.0ppg SOB M	<u>Lead:</u> 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170 <u>Tail:</u> 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	Run 1 spiral centralizer every 5 joints from the top of the curve to surface.	Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.415" wall thickness Burst=14520 psi Note:Actual centralizer schedules may be changed due to hole conditions		
		Balltown	2965	3005							
		Benson	4050	4083							
		West Falls	4620	5865							
		Rhinestreet	5865	6140							
8.5" Curve		Cashaqua	6140	6341	11.5ppg-12.5ppg SOB M						
		Middlesex	6341	6421							
		West River	6421	6514							
		Burkett	6514	6540							
		Tully Limestone	6540	6644							
8.5" Lateral	Hamilton	6644	6863	11.5ppg-12.5ppg SOB M							
	Marcellus	6863	6914								
	TMD / TVD (Production)	17740	6900								
		Onondaga	6914								

LP @ 6900' TVD / 7799' MD

8.5" Hole - Cemented Long String  
5-1/2" 23# P-110 HC CDC HTQ

+/-9941' ft Lateral

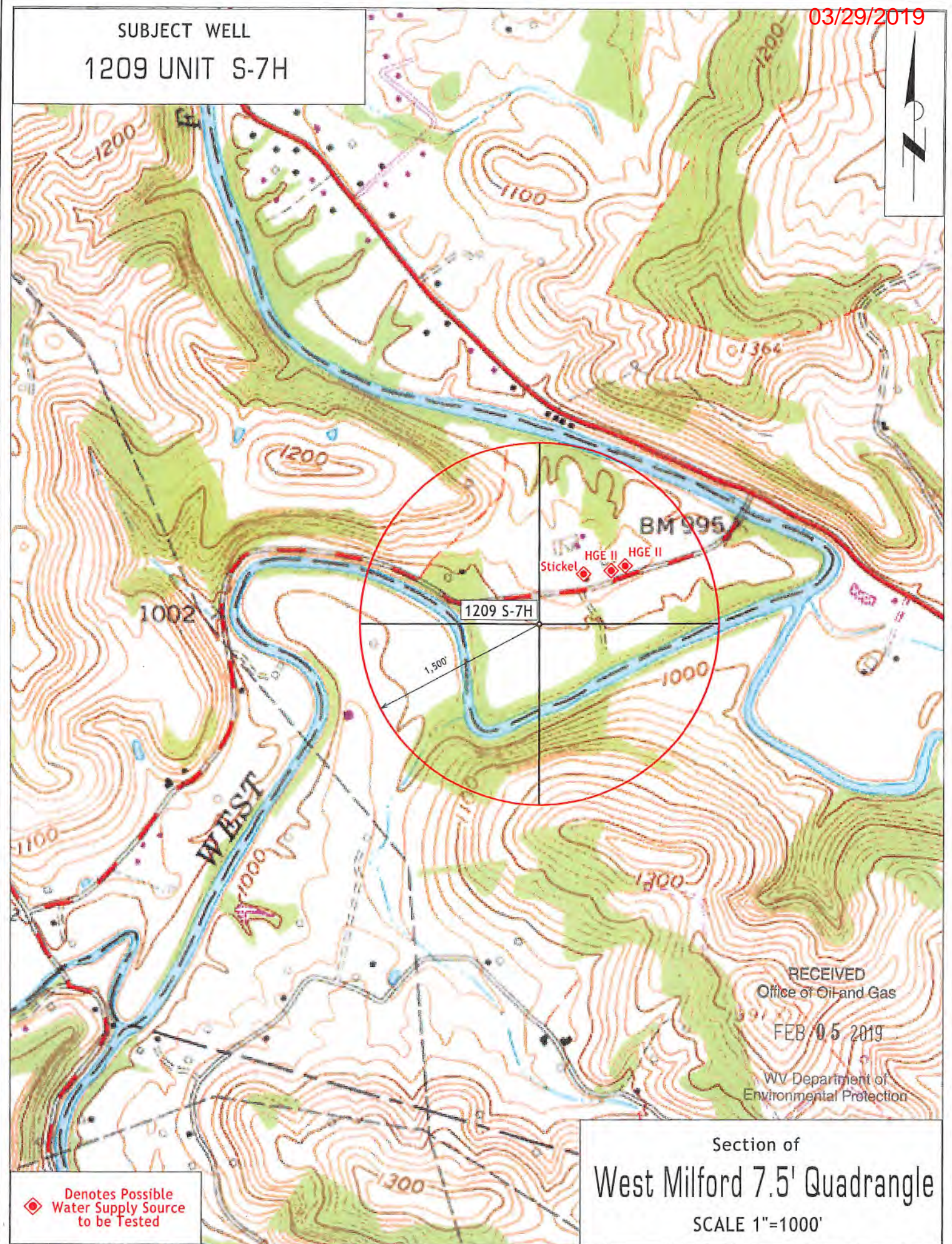
TD @ +/-6900' TVD  
+/-17740' MD

X=centralizers



03/29/2019

SUBJECT WELL  
1209 UNIT S-7H



◆ Denotes Possible Water Supply Source to be Tested

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Environmental Protection

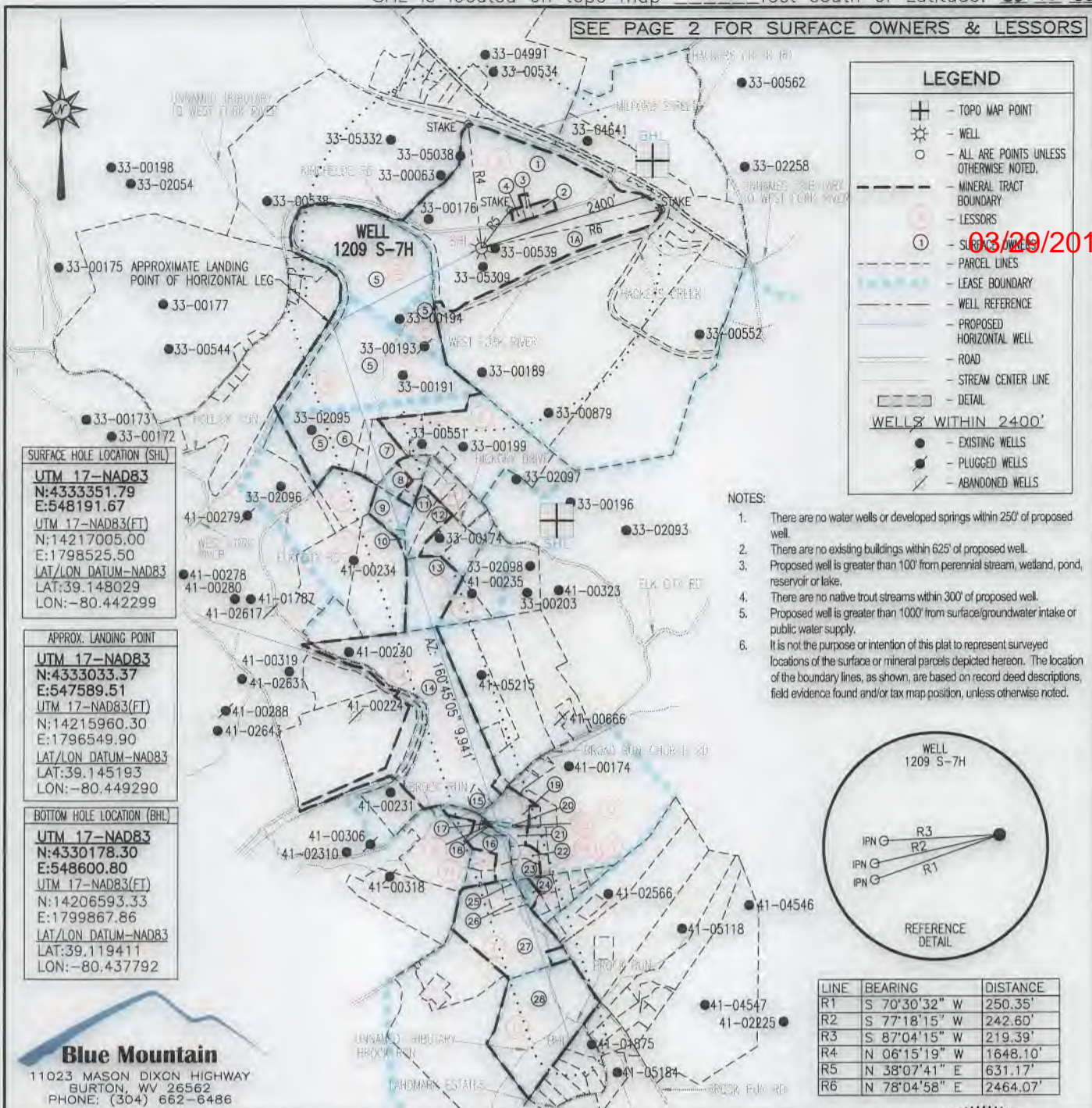
Section of  
West Milford 7.5' Quadrangle  
SCALE 1"=1000'



BHL is located on topo map 2,036 feet south of Latitude: 39° 07' 30"  
 SHL is located on topo map 6,788 feet south of Latitude: 39° 10' 00"

BHL is located on topo map 5,994 feet west of Longitude: 80° 25' 00"  
 SHL is located on topo map 7,270 feet west of Longitude: 80° 25' 00"

SEE PAGE 2 FOR SURFACE OWNERS & LESSORS



**SURFACE HOLE LOCATION (SHL)**  
 UTM 17-NAD83  
 N:4333351.79  
 E:548191.67  
 UTM 17-NAD83(FT)  
 N:14217005.00  
 E:1798525.50  
 LAT/LON DATUM-NAD83  
 LAT:39.148029  
 LON:-80.442299

**APPROX. LANDING POINT**  
 UTM 17-NAD83  
 N:4333033.37  
 E:547589.51  
 UTM 17-NAD83(FT)  
 N:14215960.30  
 E:1796549.90  
 LAT/LON DATUM-NAD83  
 LAT:39.145193  
 LON:-80.449290

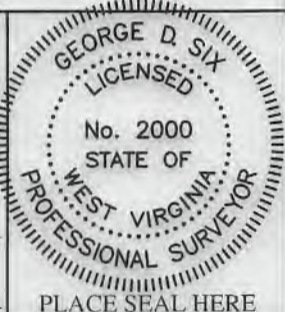
**BOTTOM HOLE LOCATION (BHL)**  
 UTM 17-NAD83  
 N:4330178.30  
 E:548600.80  
 UTM 17-NAD83(FT)  
 N:14206593.33  
 E:1799867.86  
 LAT/LON DATUM-NAD83  
 LAT:39.119411  
 LON:-80.437792

**Blue Mountain**  
 11023 MASON DIXON HIGHWAY  
 BURTON, WV 26562  
 PHONE: (304) 662-6486

FILE #: 1209 S-7H  
 DRAWING #: 1209 S-7H  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1/2500  
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT THOMAS 1498.81'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: *George D. Six*  
 R.P.E.: \_\_\_\_\_ L.L.S.: P.S. No. 2000



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

DATE: JANUARY 25, 2019  
 OPERATOR'S WELL #: 1209 S-7H  
 API WELL #: 47 33 05943 H6A  
 STATE COUNTY PERMIT

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

WATERSHED: MIDDLE WEST FORK CREEK ELEVATION: 1,007±  
 COUNTY/DISTRICT: HARRISON / UNION QUADRANGLE: WEST MILFORD, WV 7.5'  
 SURFACE OWNER: HG ENERGY II APPALACHIA, LLC ACREAGE: 95.06±  
 OIL & GAS ROYALTY OWNER: ANN COVINGTON, ET AL ACREAGE: 408.34±

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: TVD: 6,900± TMD: 17,740±  
 WELL OPERATOR HG ENERGY II APPALACHIA, LLC DESIGNATED AGENT DIANE C. WHITE  
 Address 5260 DUPONT ROAD Address 5260 DUPONT ROAD  
 City PARKERSBURG State WV Zip Code 26101 City PARKERSBURG State WV Zip Code 26101



# 1209 S-7H

## PAGE 2 OF 2

03/29/2019

	SURFACE OWNER	DIST-TM/PAR
1	DANNY LEE & ALICIA A. STICKEL	P/O 20-444/11.2
1A	HG ENERGY II APPALACHIA, LLC	P/O 20-444/11.2
2	HG ENERGY II APPALACHIA, LLC	20-444/11.3
3	AARON C. & CHRISTINA P. MEDINA	20-444/11
4	HG ENERGY II APPALACHIA, LLC	20-444/11.1
5	ROCK GARTON	12-444/26
6	DAVID W. & REBECCA A. DETAMORE	12-444/27.3
7	BONNIE M. DETAMORE	12-444/27
8	VEDA CANTRELL	12-444/28.2
9	RALPH C. & JUDITH A. GARBER	12-444/44.3
10	GARTON REAL ESTATE INC	12-444/44.2
11	DAVID G. RIFFLE ESTATE	12-444/37.1
12	KAREN L. CRISLIP	12-444/37.2
13	ROBERT SCOTT STARKEY	4-7B/59
14	KENNETH LEE GREYNOLDS	4-7B/6.2
15	KENNETH GREYNOLDS	4-7B/6
16	BROAD RUN BAPTIST CHURCH	4-7B/18
17	WV DEPT OF TRANSPORTATION	4-7B/24.2
18	BROAD RUN BAPTIST CHURCH	4-7B/24.1
19	BROAD RUN BAPTIST CHURCH	4-7B/24
20	BROAD RUN CEMETERY	4-7B/22
21	WILLIAM L. & SONYIA K. SARTIN	4-7B/29.12
22	HARTLAND HOUSING LLC	4-7C/81
23	ROBERT MILLER SR.	4-7C/71
24	JAMES R. STUTLER JR. & LISA A. HARDY	4-7C/58
25	TIMOTHY S. DERICO	4-7C/56
26	TIMOTHY S. DERICO	4-7C/29
27	CNX GAS COMPANY, LLC	4-7C/28
28	DONIS HANNAH	4-7C/26

	LESSOR	LEASE NO.	DIST-TM/PAR
A	J. B. GUSMAN ET AL	FK020606	20-444/11.2
B	J. A. HARDWAY ET AL	FK004424	12-444/26
C	J. Q. MUSSER	FK061781	
D	W. W. BRANNON ET UX	FK032708	
E	J. K. MUSSER ET UX	FK002243	12-444/26 12-444/27.3 12-444/27 12-444/28.2
F	DOMINION TRANSMISSION INC	Q101159000	12-444/44.3
G	R. A. BEEGHLEY ET UX	FK026496	12-444/44.2
H	KENNETH R. SIMONS ET AL O.B. FRASHUER ET UX	FK064201 FK064206	12-444/37.1 12-444/37.2
J	ETHEL B. PAINE ET AL	FK064249	4-7B/59
K	J. Q. MUSSER ET UX	FK002249	
M	IONA WYMER ET AL	FK064277	4-7B/6 4-7B/6.2
N	JOHN H. CROSS ET AL	FK065721	4-7B/18
P	BROAD RUN BAPTIST CHURCH BROAD RUN BAPTIST CHURCH CEMETERY ASSOCIATION	HGII0136/ HGII0138	4-7B/24.1 4-7B/24.2
P.1	BROAD RUN BAPTIST CHURCH	HGII0138	4-7B/24
P.2	BROAD RUN BAPTIST CHURCH CEMETERY ASSOCIATION	HGII0136	4-7B/22
Q	ALDA V. HITT	FK077958	4-7B/29.12 4-7C/81 4-7C/71
R	JEAN DENNING BETH ANN DUNHAM JOHN J. MAYER DOROTHY BRYANT STEPHANIE GARRETT JOHN PAUL SHOCK JR. MARK JEFFERY MAYER BROAD RUN BAPTIST CHURCH JAMES CHRISTOPHER HEATER SHIRLEY ANN CHRISTIAN JAMES E. MONEYPENNY JANE EARLE WAGONER FRANK WILLIAM MAYER DAVID E. MONEYPENNY PAULA MARIE WELLER	Q098894000 Q097913000 Q098890000 Q098888000 Q098892000 Q098887000 Q098889000 Q102242000 Q098886000 Q102241000 Q102243000 Q097914000 Q098891000 Q098893000 Q102240000	4-7C/58
S	C. A. BAILY	CNX268316000	4-7C/58
T	MAYME A. SMITH ET AL	FK067588	4-7C/58 4-7C/28 4-7C/56
U	FLOE & HUGH RAMSBURG ET AL	FK068746	4-7C/26

**SURFACE HOLE LOCATION (SHL)**  
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 N:4333351.79  
 E:548191.67  
 UTM 17-NAD83(FT)  
 N:14217005.00  
 E:1798525.50  
 LAT/LON DATUM-NAD83  
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 LON:-80.442299

**APPROX. LANDING POINT**  
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**BOTTOM HOLE LOCATION (BHL)**  
**UTM 17-NAD83**  
 N:4330178.30  
 E:548600.80  
 UTM 17-NAD83(FT)  
 N:14206593.33  
 E:1799867.86  
 LAT/LON DATUM-NAD83  
 LAT:39.119411  
 LON:-80.437792

**JANUARY 25, 2019**



API WELL #: 47      33      05943 HGA  
 STATE      COUNTY      PERMIT

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

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

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

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
----------------------	-----------------------	-----------------------	---------	-----------

"See Attached Sheets"

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Office of Oil and Gas

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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 *Diane White*  
 Its: Agent

WV Department of  
Environmental Protection

FEB 05 2019

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Office of Oil and Gas

HG Energy II Appalachia, LLC 1209S-7H LEASE CHAIN							WV Department of Environmental Protection					
TRACT #	LEGACY LEASE NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE				
A	FK020606	17-20-0444-0011-0000, 17-20-0444-0011-0001, 17-20-0444-0011-0002, 17-20-0444-0011-0003, 17-20-0444-0012-0000, 17-12-0444-0013-0000, 17-12-0444-0014-0000, 17-12-0444-0021-0000, 17-12-0444-0021-0001, 17-12-0444-0022-0000, 17-12-0445-0001-0000, 17-12-0445-0002-0000, 17-12-0445-0009-0000, 17-12-0445-0010-0000, 17-12-0445-0011-0000	Q100370000	J.B. GUSMAN AND ADALINE GUSMAN	TREAT AND CRAWFORD	NOT LESS THAN 1/8	158	8				
				TREAT AND CRAWFORD	UNITED FUEL GAS COMPANY	ASSIGNMENT	226	359				
				UNITED FUEL GAS COMPANY	FAYETTE COUNTY GAS COMPANY	ASSIGNMENT	UNRECORDED					
				FAYETTE COUNTY GAS COMPANY	HOPE NATURAL GAS	ASSIGNMENT	201	3				
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY COMPANY	MERGER/NAME CHANGE	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				
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362				
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1409	680				
				DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1442	356				
				DOMINION EXPLORATION & PRODUCTION, INC.	DOMINION TRANSMISSION, INC.	ASSIGNMENT	1457	978				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM 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	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								
B	FK004424	17-20-0444-0005-0000 17-20-0444-0026-0000	Q100366000	J.A. HARDWAY AND JANE HARDWAY, HIS WIFE	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	113	440				
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	240	210				
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	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				
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM 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	1584	942				
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660				
				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				
				D	FK032708	p/o 17-12-444-0026-0000 p/o 17-12-444-0029-0000	Q100260000	W.W. BRANNON AND ADDIE BRANNON	THE PHILADELPHIA COMPANY	NOT LESS THAN 1/8	185	107
								THE PHILADELPHIA COMPANY	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	DEED	236	111
								PITTSBURGH AND WEST VIRGINIA GAS COMPANY	HOPE NATURAL GAS COMPANY	AGREEMENT	267	55
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	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				
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58					362				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522					33				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO MEMORANDUM OF 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	1584					942				
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600					600				
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600					692				



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				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581
				J.K. MUSSER AND LAURA R. MUSSER, HIS WIFE	F.E. WILLIAMSON AND COMPANY	NOT LESS THAN 1/8	111	519
				F.E. WILLIAMSON AND COMPANY	THE CARTER OIL COMPANY	ASSIGNMENT	118	428
				THE CARTER OIL COMPANY	SOUTH PENN OIL COMPANY	ASSIGNMENT	128	262
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	240	210
				THE CARTER OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	203	73
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	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
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	1522	33
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO MEMORANDUM OF 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	1584	942
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581
F	FK052975	DTI FEE	DTI FEE	DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8	723	506
				R.A. BEEGHLEY AND HATTIE F. BEEGHLEY, HIS WIFE	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	121	133
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	240	210
				SOUTH PENN OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	210	104
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	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
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	(HARRISON)1543 (LEWIS) 684	1235 57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	(HARRISON)1576 (LEWIS) 712	125 848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	(HARRISON)1584 (LEWIS) 717	942 1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	(HARRISON)1600 (LEWIS) 722	660 139
				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	AMENDED AND RESTATED PARTIAL ASSIGNMENT	(LEWIS) 723	527
				J.C. MUSSER ETAL	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	696	246

WV Department of Environmental Protection

FEB 05 2019

WV Department of  
Environmental Protection

H	FK064201 & FK064206	p/o 04-007B-0059-000, 12-444-0037-0001, 12-444-0037-0002, 12-444-0037-0003, 12-444-0037-0004, 12-444-0037-0005, 12-444-0037-0006, 12-444-0037-0007, 12-444-0037-0008, 12-444-0037-0009	Q100294000 & Q100295000	J.C. MUSSER ETAL	HOPE NATURAL GAS COMPANY	MODIFICATION						
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	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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				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	1522	33				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	FIRST AMENDMENT TO MEMORANDUM OF 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	1584	942				
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660				
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692				
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
				DOMINION TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1601	581				
				J	FK064249 (NOTE: This lease has recordings in Harrison County)	p/o 21-04-007B-0059-0000	Q100297000	ETHEL B. PAYNE; EVELYN BEEGHLEY, WIRT H. BEEGHLEY AND ELIZABETH BEEGHLEY, HIS WIFE; VERA I. BAILEY AND H.G. BAILEY, HER HUSBAND; EDWARD BURL BEEGHLEY AND BESSIE T. BEEGHLEY, HIS WIFE AND VERA I. BAILEY	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	230	401
								HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	LEWIS 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 OF 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					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				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	CORRECTIVE ASSIGNMENT TO DB 717-1	725	784								
				J.Q. MUSSER AND ROSA MUSSER	HOPE NATURAL GAS	NOT LESS THAN 1/8	111	522				
				HOPE NATURAL GAS	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	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				
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33				
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	FIRST AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	1524	491				



K	FK002249	p/o 17-12-0444-0029-0000, p/o 17-12-0444-0030-0000, p/o 17-12-0444-0003-0001, p/o 21-04-007B-0005-0004, p/o 21-04-007B-0060-0000	Q100652000	CNX GAS COMPANY, LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	(HARRISON)1543 (LEWIS) 684	1235 57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC AND NOBLE ENERGY, NC.	PARTIAL ASSIGNMENT (32%)	(HARRISON)1576 (LEWIS) 712	848
				CNX GAS COMPANY, LLC	NOBLE ENERGY, INC.	ASSIGNMENT	(HARRISON)1584 (LEWIS) 717	942 1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	(HARRISON)1600 (LEWIS) 722	660 139
				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	(HARRISON)1601 (LEWIS) 723	581 499
L	FK014031	21-04-007B-0005-0000; 21-04-007B-0005-0001; 21-04-007B-0005-0002; 21-04-007B-0005-0003; 21-04-007B-0005-0004; 21-04-007B-0005-0005; 21-04-007B-0005-0006; 21-04-007B-0005-0007; 21-04-007B-0031-0000; p/o 21-04-007B-0035-0000; p/o 21-04-007B-0035-0004; p/o 21-04-007B-35-0005	Q100258000	S.G. HALL AND EMMA HALL, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	68	130
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	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 OF 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	170
				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
				M	FK064277	21-04-007B-0004-0000 21-04-007B-0006-0000 21-04-007B-0006-0001 21-04-007B-0006-0002 21-04-007B-0007-0000 21-04-007B-0007-0001 21-04-007B-0007-0002 21-04-007B-0007-0003 p/o 21-04-007B-0008-0000	Q100855000	IONA WYMER, WIDOW; FAYNE WYMER AND IRENE WYMER, HIS WIFE; JUANITA KEMP AND PAUL KEMP, HER HUSBAND; WILMA E. BEHNER AND FREDERICK G. BEHNER, JR., HER HUSBAND; EVA WYMER COLEMAN AND T. FORREST COLEMAN, HER HUSBAND
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	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	CORP 9					628
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF 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 TO DB 717-1	725					784
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
Q		21-04-007B-0024-0000 21-04-007B-0022-0000	HG1136					BROAD RUN BAPTIST CHURCH

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Q	Well	Lease	Operator	Owner	Operator	Term	738	120
Q.1		21-04-007B-0024-0000 21-04-007B-0022-0000	HGII136 & HGII138	BROAD RUN BAPTIST CHURCH BROAD RUN BAPTIST CHURCH CEMETERY ASSOCIATION	HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8 NOT LESS THAN 1/8	738 738	120
Q.2		21-04-007B-0024-0000 21-04-007B-0022-0000	HGII138	BROAD RUN BAPTIST CHURCH CEMETERY ASSOCIATION	HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8	738	124
P	FK065721	21-04-007B-0018-0000; 21-04-007B-0018-0001; 21-04-007C-0067-0000; 21-04-007C-0061-0000; 21-04-007C-0076-0000; 21-04-007C-0063-0000; 21-04-007C-0057-0000;	Q100863000	J. H. Cross and Hattie E. Cross	Eastern Oil Company	NOT LESS THAN 1/8	52	1
				Eastern Oil Company	Allegheny Gas Company	ASSIGNMENT	116	531
				Allegheny Gas Company	HOPE NATURAL GAS COMPANY	ASSIGNMENT	232	153
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	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 CORPORATON	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF 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	170
R	FK077958	21-04-007B-0026-0000; 21-04-007B-0028-0000; 21-04-007B-0028-0001; 21-04-007B-0028-0002; 21-04-007B-0029-0000; 21-04-007B-0029-0001; 21-04-007B-0029-0002; 21-04-007B-0029-0003; 21-04-007B-0029-0004; 21-04-007B-0029-0005; 21-04-007B-0029-0006; 21-04-007B-0029-0007; 21-04-007B-0029-0009; 21-04-007B-0029-0009; 21-04-007B-0029-0010; 21-04-007B-0029-0011; 21-04-007B-0029-0012; 21-04-007B-0029-0013; 21-04-007B-0029-0014; 21-04-007B-0029-0015;	Q100740000	ALDA V. HITT, WIDOW	R.E. BEERY AND VICTOR BALDINI, PARTNERS DBA BITNER FUEL COMPANY	NOT LESS THAN 1/8	208	462
				R.E. BEERY AND VICTOR BALDINI, PARTNERS DOING BUSINESS AS THE BITNER FUEL COMPANY, AND FLKOIRENCE BALDINI, WIFE OF VICTOR BALDINI	R.E. BEERY	ASSIGNMENT	295	580
				EARL BEERY, DE COSTA E. SMITH, JR. AND MARK P. HITT, EXECUTORS AND TRUSTEES UNDER THE LAST WILL AND TESTAMENT OF ROBERT E. BEERY, DECEASED	CONSOLIDATED GAS SUPPLY CORPORATION	ASSIGNMENT	312	80
				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 OF 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	170
				T	268316000	04-07C-0060-0000 04-07C-0060-0001 04-07C-0058-0000 04-07C-0055-0000 04-07C-0032-0000 04-07C-0064-0000 04-07C-0059-0000 04-07C-0068-0000 04-07C-0062-0000	CNX268316000	C.A. BAILEY AND M.C. BAILEY, HER HUSBAND, AND EMMA GOLDSMITH AND H.B. GOLDSMITH, HER HUSBAND
CARNEGIE NATURAL GAS COMPANY	CARNEGIE PRODUCTION COMPANY	ASSIGNMENT	558					550
CARNEGIE PRODUCTION COMPANY	EQUITABLE PRODUCTION-EASTERN STATES, INC.	MERGER	WVSOS					
EQUITABLE PRODUCTION-EASTERN STATES, INC.	ETBG-APOLLO DIVISION, A DIVISION OF ET BLUE GRASS COMPANY	ASSIGNMENT OF OPERATING RIGHTS	572					371
EQUITABLE PRODUCTION-EASTERN STATES, INC.	EQT PRODUCTION COMPANY	MERGER	WVSOS					
EQT PRODUCTION COMPANY	CNX GAS COMPANY, LLC	TERM ASSIGNMENT	687					382
CNX GAS COMPANY LLC	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	737					8

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U	FK067588	21-04-007C-0011-0003, 21-04-007C-0011-0013, 21-04-007C-0011-0014, 21-04-007C-0025-0001, 21-04-007C-0025-0002, 21-04-007C-0025-0003, 21-04-007C-0027-0000, 21-04-007C-0028-0000, 21-04-007C-0029-0000, 21-04-007C-0056-0000, 21-04-007C-0058-0000, 21-04-007C-0011-0002, 21-04-007C-0011-0012, 21-04-007C-0037-0000, 21-04-007B-0037-0000, 21-04-007B-0020-0000	Q100447000	MAYME A. SMITH AND J.W. SMITH, HER HUSBAND; S.M. ALLMAN AND CORA B. ALLMAN, HIS WIFE; EARL WIMER AND EMMA E. WIMER, HIS WIFE; BERNICE A. WOODDELL, SINGLE; ZELLA BROWN AND TRUMAN BROWN, HER HUSBAND; KENNETH E. ALLMAN AND HELEN L. ALLMAN, HIS WIFE; LLOYD W. SMITH AND MARJORIE M. SMITH, HIS WIFE; KATHLEEN C. SAVAGE AND FRED C. SAVAGE, HER HUSBAND; BERNARD W. WOODDELL AND MARY L. WOODDELL, HIS WIFE; RANSAL T. SMITH AND LA VAUGHN SMITH, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	248	551				
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	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 CORPORATON	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF 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	170				
				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				
				V	FK068746	21-04-007C-0026-0000	Q101067000	FLOE RAMSBURG AND HUGH RAMSBURG, HER HUSBAND; RUTH ALLMAN, WIDOW; RUSSELL ALLMAN, JR. AND INA ALLMAN, HIS WIFE; RANSEL ALLMAN AND MELBA ALLMAN, HIS WIFE; MARJORIE NEELY AND LEE R. NEELY, HER HUSBAND; WILDA NELL DAVIS AND JOSPEH G. DAVIS, HER HUSBAND; GUY ALLMAN, WIDOWER; KATHLEEN MOSCAR AND JOE MOSCAR, HER HUSBAND; VELMA LUTAK AND LOUIE LUTAK, HER HUSBAND; DENSEL C. ALLMAN AND LILLIAN ALLMAN, HIS WIFE; HAYWARD ALLMAN AND ORA JEAN ALLMAN, HIS WIFE; RAYMOND ALLMAN AND LEO ALLMAN, HIS WIFE; HOWARD ALLMAN AND MINNIE FRANCES ALLMAN, HIS WIFE; LORA A. BAILEY, WIDOW; A.C. ALLMAN AND ORA B. ALLMAN, HIS WIFE; GERALDINE HAMMER; L.C. ALLMAN AND FLORENCE ALLMAN, HIS WIFE AND BERNARD ALLMAN AND BETTY ALLMAN, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	257	348
								HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	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 OF 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					499				
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723					527				
	BETH ANN DUNHAM	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	697	297							
	JANE EARLE WAGONER	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	710	149							

1209S LEASE CHAIN

S	Q097913000, Q097914000, Q098886000, Q098887000, Q098888000, Q098889000, Q098891000, Q098892000, Q098893000, Q098894000, Q102240000, Q102241000, Q102242000, Q102243000	21-04-007C-0058-0000	Q097913000, Q097914000, Q098886000, Q098887000, Q098888000, Q098889000, Q098891000, Q098892000, Q098893000, Q098894000, Q102240000, Q102241000, Q102242000, Q102243000	JAMES CHRISTOPHER HEATER	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	702	648
				JOHN PAUL SHOCK JR	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	702	663
				DOROTHY BRYANT	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	702	669
				MARK JEFFERY MAYER	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	700	41
				JOHN J MAYER	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	700	44
				FRANK WILLIAM MAYER	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	700	47
				STEPHANIE GARRETT	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	700	50
				DAVID E MONEYPENNY	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	700	53
				JEAN DENNING	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	702	681
				PAULA MARIE WELLER	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	702	654
				SHIRLEY ANN CHRISTIAN	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	702	675
				BROAD RUN BAPTIST CHURCH	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	708	447
				JAMES E MONEYPENNY	CNX GAS COMPANY LLC	NOT LESS THAN 1/8	705	6
				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	499
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	AMENDED AND RESTATED PARTIAL ASSIGNMENT	723	527

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

03/29/2019

January 29, 2019

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

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WV Department of  
Environmental Protection

RE: Drilling Under Roads – Nays 1209 S-7H  
Union District, Harrison County  
West Virginia

Dear Ms. Adkins:

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

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

Very truly yours,

*Diane White*

Diane C. White

Enclosures

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

Date of Notice Certification: 01/25/2019

API No. 47- \_\_\_\_\_  
Operator's Well No. Nays 1209 S-7H  
Well Pad Name: Nays 1209

**FEB 05 2019**

**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>548191.7</u>
County: <u>Harrison</u>		Northing: <u>4333351.8</u>
District: <u>Union</u>	Public Road Access: <u>Kircheloe Run Road / SR35</u>	
Quadrangle: <u>West Milford 7.5'</u>	Generally used farm name: <u>Nays</u>	
Watershed: <u>West Fork</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: 40px;"><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p><b>OOG OFFICE USE ONLY</b></p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p>
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**Required Attachments:**

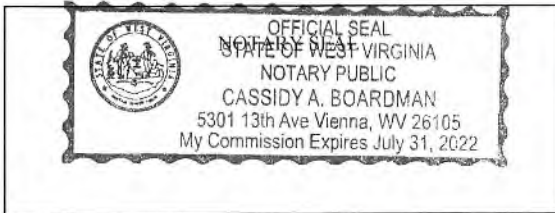
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication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



**Certification of Notice is hereby given:**

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

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



Subscribed and sworn before me this 25th day of January, 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](mailto:depprivacyofficer@wv.gov).

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Office of Oil and Gas  
FEB 05 2019  
WV Department of  
Environmental Protection

**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:** 01/23/2019 **Date Permit Application Filed:** 02/08/19

**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  
Address: 5260 Dupont Road  
Parkersburg, WV 26101

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

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

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

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

SURFACE OWNER(s) (Impoundments or Pits)

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

COAL OWNER OR LESSEE

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

COAL OPERATOR

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

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

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

OPERATOR OF ANY NATURAL GAS STORAGE FIELD

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

\*Please attach additional forms if necessary

RECEIVED  
Office of Oil and Gas  
FEB 05 2019  
WV Department of  
Environmental Protection



**Notice is hereby given:**

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

**This Notice Shall Include:**

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

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

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

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

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

**Well Location Restrictions**

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



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

**Water Well Testing:**

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

**Water Testing Laboratories:**

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

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

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

**Written Comment:**

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

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

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



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

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

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

**Comment Requirements**

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

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

**Permit Denial or Condition**

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

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

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

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

WW-6A  
(8-13)

API NO. 4703305010 03/29/2019  
OPERATOR WELL NO. Nays 1209 S-7H  
Well Pad Name: Nays 1209

**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  
Facsimile: 304-863-3172

**Oil and Gas Privacy Notice:**

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



Subscribed and sworn before me this 23rd day of January, 2019.

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

My Commission Expires 11/2/2021



**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:** 1/16/19      **Date of Planned Entry:** 1/23/19

**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: \_\_\_\_\_

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

MINERAL OWNER(S)

Name: See attached list

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

\_\_\_\_\_

RECEIVED  
Office of Oil and Gas  
FEB 05 2019  
WV Department of  
Environmental Protection

\*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>39.148029 / 80.442299</u>
County: <u>Harrison</u>	Public Road Access: <u>SR 19</u>
District: <u>Union</u>	Watershed: <u>West Fork</u>
Quadrangle: <u>West Milford 7.5'</u>	Generally used farm name: <u>Nays</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 57<sup>th</sup> 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](http://www.dep.wv.gov/oil-and-gas/pages/default.aspx).

**Notice is hereby given by:**

Well Operator: <u>HG Energy II Appalachia, LLC</u>	Address: <u>5260 Dupont Road</u>
Telephone: <u>304-420-1109</u>	<u>Parkersburg, WV 26101</u>
Email: <u>dwhite@hgenergyllc.com</u>	Facsimile: <u>304-863-3172</u>

**Oil and Gas Privacy Notice:**

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

WW-6A3  
(1-12)

1209S - 7H

Page 1 Continued

Mineral Owners

Alicia Darlene Simons Casuccio  
166 Darlene Drive  
Corapolis, PA 15108

Allen Dale Baker  
700 Timothy Drive  
Frankfort, KY 40601

Ann Covington  
1401 Torrey Pines Dr  
Columbia, MO 65203-4825

Appalachian Royalties Inc.  
PO Box 1917  
Clarksburg, WV 26302

Barbara Allman  
721 Tamwood Drive  
Canal Fulton, OH 44614

Bernard Bennett  
111 Hawk Highway  
Lost Creek, WV 26385

Beth Ann Dunham  
988 Jackson Mill Road  
Jane Lew, WV 26378

Big Chief Drilling & Production Co  
PO Box 329  
Weston, WV 25452

Brandi Lopex  
300 Washington Ave Apt A 203  
Elyria, OH 44035

Brenda Smith  
9908 Easy St  
Disputanta, VA 23842

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FEB 05 2019

Brent Woddell  
315 Barricks Road Apt 180  
Louisville, KY 40229

Brian Allman  
15462 Gulf Blvd, Apt 207  
Madeira Beach, FL 33708-1832

WV Department of  
Environmental Protection

Buckner W. Hornor  
486 Irish Hill Rd  
Hopkinton, NH 03229-2202

Carmelita Gaines Yukevich  
530 Scott Hall Road  
Burgettstown, PA 15021

Carol Jean Mannen  
8 Loockerman Ave.  
Poughkeepsie, NY 12601

Carol L Capwell  
10626 Demilo Place, Apt 103  
Orlando, FL 32836

Charles E Garton Nonmarital Trust  
3482 Littleburg Rd  
Bluefield, WV 24701

Chesapeake Appalachia, LLC  
PO Box 6070  
Charleston, WV 25362



WW-6A3

(1-12)

1209S - 7H

Page 1 Continued

Mineral Owners

Christina Salziger  
911 Echo Bay Ct  
Gambrills, MD 21054

David Hugh Ramsburg  
P.O. Box 876  
Jane Lew, WV 26378

Dawn Ford Cramer  
71618 Gast Station Shippey Road  
St. Clairsville, OH 43950

Deborah Nay Stutler  
9967 WV Route 185  
New Milton, WV 26411

Derrick J. Ramsburg  
6377 Main Street  
Jane Lew, WV 26378

Diane LaPosta  
6700 Blake Pledger Court North  
Fort Myers, FL 33917

Donald G. Carder  
5060 Churchville Road  
Camden, WV 26338

Donald R. Wilson  
212 NE 56th St  
Oak Island, NC 28465-4919

Donna Davis  
2128 Kincheloe Road  
Jane Lew, WV 26378

Connie S. Carpenter  
952 Valley Chapel Road  
Weston, WV 26452

David Hugh Ramsburg II  
2801 Chesterfield Ave.  
Charleston, WV 25304

Deana Diane Roush  
8 Silk Oak Street  
Placid, FL 33852

Debra J. Heater  
441 Hollick Run Road  
Jane Lew, WV 26378

Dewaine T. Norris  
1869 Sierra Drive  
Marietta, GA 30062

Dollena Joy Barber  
1820 South Contention Lane  
Cottonwood, AZ 86326

Donald R. Reynolds  
PO Box 607  
Jane Lew, WV 26378

Donald Reed Baker  
5575 New Glendale Road  
Elizabethtown, KY 47201

Dorothy Bryant  
13430 Coppermine Road Apt. 230  
Herndon, VA 20171-4486

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Mineral Owners

Dorsey B. King, Jr.  
1446 Hildreth Road  
Buckhannon, WV 26201

Douglas R Frishe  
720 6th St  
Wolfforth, TX 79382

Dwight L. Musser  
PO Box 597  
Scott Depot, WV 22560

Eleanor Lou Dotson  
109 Loretta Ave  
Follensbee, WV 26037

Elizabeth Ann Behner Neri  
7506 West Riverchase Drive  
Temple Terrace, FL 33637

Elizabeth Raye Musser  
137 Wilson Lane  
Liberty, WV 25124

Ellen E Corathers  
14824 Shelter Ln  
Haymarket, VA 20169

Erin Harrington & Hugh M Duffy  
97 Steele Road W  
Hartford, CT 06119

Evelyn B. McDonald  
1565 Two Lick Road  
Jane Lew, WV 26378

Evelyn F. Beeghley  
1572 McNaughten Road  
Columbus, OH 43232

Frances M. Allman  
1915 48th St. NW  
Canton, OH 44646

Frank William Mayer  
224 South Howard St  
Clarksburg, WV 26301

Fred Cameron Michels  
823 North 28th St  
Allentown, PA 18104

Frederick G. Behner, IV  
3350 West Hillsborough Ave, Apt 431  
Tampa, FL 33614

Gloria Rose Pauley  
5521 West Pea Ridge Road  
Huntington, WV 25705

Gregory K & Clair Kearney Harrington  
1805 E. 16th Street, Unit B  
Austin, TX 78702

Harriet Sawyer  
39679 Dun Rovin Drive  
Northville, MI 48168

Helen L. Golden  
1766 Geelick Road  
Weston, WV 26452

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Mineral Owners

I. L. Morris ✓  
PO Box 219  
Coalton, WV 26257-0219

Ida Ruth Hughes ✓  
2031 Kincheloe Road  
Jane Lew, WV 26378

Jacqueline McLaughlin ✓  
1033 Loveberry Run Road  
Weston, WV 26452

Jacqueline Musser McGhee ✓  
53 Hillhouse Lane  
Ringgold, GA 30736

James Christopher Heater ✓  
1119 Highland Ave.  
Vandergrift, PA 15690

James Y. Hornor and Jean S. Hornor ✓  
5002 Esmond Lane  
Castle Rock, CO 80108-9027

Janine R. Goff ✓  
PO Box 1977  
Middleburg, FL 32050

Jean Denning ✓  
18 Fairway Village Lane  
Isle of Palms, SC 29451-2731

Jeannie McCormick ✓  
1652 Lost Creek Romines Mill Road  
Lost Creek, WV 26385

Jeffrey Allman ✓  
1202 McWhorter Road  
Jane Lew, WV 26378

Jeffrey Allman ✓  
3805 McDagin Circle #A  
Fort Campbell, KY 42223

Jerry Lee Simons ✓  
236 Riverdale Road  
Clarksburg, WV 26301

Joan Musser Massucci ✓  
24325 Cardinal Place  
Lake Forrest, CA 92630

Joanne E Shoemaker ✓  
3712 Shady Lane  
Sandusky, OH 44870-8954

Joanne E. Wolfe ✓  
45746 W J 1 Ranch Road  
Wickenburg, AZ 85390

John E. Corkrean Trust ✓  
2515 Winona Ave  
Leesburg, FL 34748

John Henry McWhorter ✓  
5392 Duck Creek Road  
Lost Creek, WV 26385

John J. Mayer ✓  
50 Sandfork Rd  
New Milton, WV 26411

James R. Ketting Jr. ✓  
P.O. Box 511  
Fairmont, WV 2655-0571

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Mineral Owners

John Paul Shock, Jr.  
1 Oakmont Court  
Little Rock, AR 72212

John R. Gibbs  
4979 Peggy Ann Drive  
New Franklin, OH 44319

Joseph C & Melissa Bargerhuff  
76 Wymer Run Rd.  
Jane Lew, WV 26378

K Kendall & Margaret Gaines Living Trust  
12401 Gayton Road Apt #449  
Henrico, VA 23238

Karen Wolfe Coone  
16300 SE 59th Street  
Ocklawaha, FL 32179

Karol Wolfe Yeatts  
8446 Campbell Avenue  
Sebastian, FL 32958

Kathryn Ruth Ellis  
16300 S.E. 59 th Street  
Ocklawaha, FL 32179

Kathy D. Bennett  
1248 Long Run Road  
Lost Creek, WV 26385

Kathy Frishe  
512 W. Hullum Street  
Breckenridge, TX 76424

Kimberly Zaner  
412 Downing Drive  
Chesapeake, VA 23322

Kristine L. White  
323 Silky Leaf Drive  
Houston, TX 77073

Larry Allman  
329 Ralph Miller Road  
Lexington, NC 27295

Lee Gregory  
1846 Powell Drive #106  
Fort Myers, FL 33917

Leslie G Robinson  
2108 Pettigrew St  
Sullivans Island, SC 29482-0307

Letitia Alkire  
65 Oak Street  
Salem, WV 26426

Linda S. Harris  
326 Township Road 1167  
Proctorville, OH 45669

Lois A. Radabaugh  
17473 Indian Hollow Road  
Grafton, OH 44044

Lori Henry  
12 Deerfield Road  
South Burlington, VT 05403

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Mineral Owners

Lynn Histing  
6390 Toronto Court  
Sparks, NV 89436

Margaret Ann McEndree  
15391 Gates Street  
Doylestown, OH 44230

Marilyn Beck  
10335 Township Rd 32  
Arlington, OH 45814-9788

Marjorie Neely  
375 Neely Hollow Rd  
Jane Lew, WV 26378

Mark Allman  
7 Avon court  
Bloomington, IL 61701

Mark Jeffery Mayer  
91 Odd Fellow Lane  
Lost Creek, WV 26447

Mary H. Balmer  
619 Ohio Ave  
Eustis, FL 32726-5121

Mary Jane Lewis  
146 E Main St  
Clarksburg, WV 26301

Mary Katherine Gum  
PO Box 321  
Jane Lew, WV 26378

Mary Lou Buck  
2207 Park Ave  
Parkersburg, WV 26101

Marylyn K. Wolf  
3492 South Oakdale Terrace  
Inverness, FL 34452

Mathew Gaines & Lauren L Harrington  
802 N 20th Street  
Philadelphia, PA 19130

Melody Meier  
2401 N Abram Road, Box 207  
Mission, TX 78572

Merrill F. Wymer, Jr.  
69856 The Meadows  
St. Clairsville, OH 43950

Michael Ross  
PO Box 880  
Glennville, WV 26351

Michael W Frishe  
150 Rebel Hill Dr  
Mooresville, NC 28115

Michael Wymer  
24 Market Court  
Bradford Woods, PA 15015

Mike Ross, Inc.  
PO Box 219  
Coalton, WV 26257-0219

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Mineral Owners

Mike Ross, Inc.  
PO Box 397  
Glennville, WV 26351-0397

Nardella Energy, LLC  
309 John Street  
Clarksburg, WV 26301

Nelson R and Elizabeth J Bates  
808 Broad Run Rd  
Jane Lew, WV 26378

Patricia A. Moody  
121 Pricetown Road  
Weston, WV 26452

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Patricia Butcher  
1633 Fuller Road  
Colorado Springs, CO 80920

Patricia Byrnes  
24012 Pear Tree Circle  
Plainfield, IL 60544

Paul Allen Hornor Jr.  
161 Cooing Dove Drive 9  
Bridgeport, WV 26330-6749

Paula E Freeman  
42023 Shadow Creek Ave  
Gonzales, LA 70737

Paula Freeman  
789 Elck City Road  
Jane Lew, WV 26378

Paula M Weller  
114 Kulps Rd  
Barto, PA 19504

Paula Marie Weller  
114 Kulps Road  
Barto, PA 19504-8848

Peggy Joan Cunningham  
255 Mitchell Creek Rdg.  
Wetumpke, AL 36093

Phillip A Frishe  
8704 Broad Street  
New Port Richey, FL 34654

Phyllis Anne Taylor  
187 River View Drive St  
Albans, WV 25177

Phyllis Kay Beare  
PO Box 388  
Jane Lew, WV 26378

Rebecca Lynn Taylor  
321 Valley Chapel Rd  
Weston, WV 26452

Rebecca Vanhorn  
P.O. Box 555  
Lost Creek, WV 26385

Richard Allman  
700 W. Phillip Ave Apt. 111  
North Platte, NE 69101



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Mineral Owners

Richard Bailey  
1605 Krebs Court  
Newark, OH 43055

Robert D. Turnbull  
403 Linway NW  
Massilon, OH 44646

Robert Lee Simon  
13905 SW 74th Ave  
Miami, FL 33158

Robert S Brown  
250 Dondanville Rd  
St Augustine, FL 32080-6405

Roberta M Donaldson  
7725 Heights Drive  
Louisville, KY 40291

Roberta M Green  
789 Oak City Road  
Jane Lew, WV 26378

Rock Garton  
81 Hickory Drive  
Jane Lew, WV 26378

Ronald H. Allman II  
350 E Main St, Apt 2  
Bridgeport, WV 26330

Savin Lumber Company  
190 Vineyard Drive  
Weston, WV 26452

Richards Resources  
608 Independence Road  
Salem, WV 26426

Robert E. Donaldson  
858 Stevens Lane  
Bloomfield, KY 40008

Robert Max McDonald  
97 Valley Ridge  
Ojai, CA 93028

Roberta Green  
789 Oak City Road  
Jane Lew, WV 26378

Roberta M Green  
410 Masters Dr  
Cross Junction, VA 22625

Roberta Robinson  
Rt 5 Box 100  
Salem, WV 26426

Roger Allman  
50 Royal Lane  
Homer, WV 26372

Sandee D. Barberio  
1932 Gould Avenue  
Clarksburg, WV 26301

Scott Winn  
12151 San Marino Ave NW  
Uniontown, OH 44685

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Mineral Owners

Sharon Ann Stears  
710 Seib Dr  
O Fallon, Mo 63366

Sharon Lee Allman  
1187 McWhorter Road  
Jane Lew, WV 26378

Sharon Stears  
710 Seib Drive  
O'fallon, MO 63366

Sharon Sue Garrison  
PO Box 388  
Jane Lew, WV 26378

Sharron Lipton  
113 Regency Cir  
Anderson, SC 29625

Shauna R. Fesler  
235 Lee Street  
Weston, WV 26452

Sheri L. Woddell  
541 Metcalf Road  
Elyria, OH 44035

Shirley A Christian  
6089 Pond View Dr  
Birdsboro, PA 19508

Shirley and Keith Murphy  
828 Laurel Park Road  
Clarksburg, WV 26301

Shirley Murphy  
828 Laurel Park Road  
Clarksburg, W 26301

Shirley Passmore  
1604 E. Jackson St.  
Bloomington, IL 61701

Stephanie Garrett  
303 Austin Ave  
Clarksburg, WV 26301

Sunny Glen Oil & Gas  
95 Sunny Glen Lane  
Salem, WV 26426

Susan G. England  
3006 Little Dale Road  
Akron, OH 44319

Teresa H. Patino  
624 Fawell Court  
Naperville, IL 60565

Terry Lynn Wimer  
12 River Street  
Glenville, WV 26351

Terry Wayne Simons  
1104 North 20th St  
Clarksburg, WV 26304

Koelln Family Trust  
802 Reuter Drive  
Hastings, MN 55033

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Thomas F. Norris  
188 Montauck Dr  
Richmond Hills, GA 31324

Thomas H. Wilson  
1412 Western Ave  
Morgantown, WV 26505-2148

Thomas L Brown  
40 Michelle Circle  
Atlanta, GA 30342

Trustees, Broad Run Baptist Cemetery  
P.O. Box 504  
Jane Lew, WV 26378

Trustees, Broad Run Baptist Church  
P.O. Box 542  
Jane Lew, WV 26378

Vicki Offield  
1304 North 19th Street  
Clarksburg, WV 26301

Vickie L Bolyard  
98 Roy Rd  
Thornton, WV 26440

Waco Oil & Gas Company, Inc.  
PO Box 880  
Glennville, WV 26351

Walter G. Krauss  
923 Waterside Lane  
Bradenton, FL 34209

Wilda Louise Berg  
88 Wymer Run Rd  
Jane Lew, WV 26378

William Bennett  
P.O. Box 383  
Lost Creek, WV 26385

William Donaldson  
1360 York Road  
Clarksville, TN 37042

William J Frishe  
5730 Rutledge Pike  
Knoxville, TN 37924

WV Minerals Inc  
PO Box 5044  
Fairmont, WV 26555

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HG Energy II Appalachia, LLC not noticed via certified mail

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:** 10/29/2018 **Date Permit Application Filed:** 11/09/2018

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

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HAND DELIVERY  CERTIFIED MAIL \*  
RETURN RECEIPT REQUESTED

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

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

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

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

**Notice is hereby given:**

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

State: West Virginia UTM NAD 83 Easting: 548191.7  
County: Harrison Northing: 4333351.8  
District: Union Public Road Access: Kincheloe Road/ SR35  
Quadrangle: West Milford 7.5' Generally used farm name: Cone  
Watershed: West Fork

**This Notice Shall Include:**

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

**Notice is hereby given by:**

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

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

**Oil and Gas Privacy Notice:**

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

\* Notice was not sent because HG Energy II Appalachia, LLC is the owner of the Surface Property and the Operator submitting the well work application.



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

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**

**Date of Notice:** 10/31/2018      **Date Permit Application Filed:** 11/09/2018

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

CERTIFIED MAIL       HAND \*  
RETURN RECEIPT REQUESTED      DELIVERY

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

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

Name: 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(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: West Virginia      UTM NAD 83      Easting: 548191.7  
County: Harrison      Northing: 4333351.8  
District: Union      Public Road Access: Kincheloe Run Road/ SR35  
Quadrangle: Audra 7.5'      Generally used farm name: Cone  
Watershed: Elk Creek

**This Notice Shall Include:**

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

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

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

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**Oil and Gas Privacy Notice:**

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

\* Notice was not sent because HG Energy II Appalachia, LLC is the Owner of the Surface Property and the Operator submitting the well work application.



0330594 03/29/2019

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION  
**Division of Highways**

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

Thomas J. Smith, P. E.  
Secretary of Transportation/  
Commissioner of Highways

November 1, 2018

Jill M. Newman  
Deputy Commissioner

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

Subject: DOH Permit for the Nays 1209 Well Pad, Harrison County  
S-7H Well Site ✓

Dear Mr. Martin,

This well site will be accessed from Permit #04-2018-0673 issued to HG Energy II Appalachia for access to the State Road for a well site located off of Harrison County 35 SLS.

The 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 January 3, 2012.

Very Truly Yours,

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

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Cc: Diane C. White  
HG Energy II, LLC  
CH, OM, D-4  
File

WV Department of  
Environmental Protection



**List of Frac Additives by Chemical Name and CAS #****Nays 1209 Well Pad (N-1H to N-6H, S-7H to S-12H)**

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

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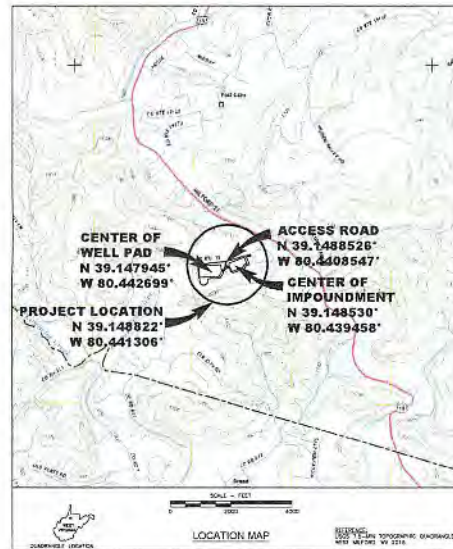
# CONSTRUCTION IMPROVEMENT PLANS WITH EROSION AND SEDIMENT CONTROLS HG 1209 PAD & IMPOUNDMENT



UNION DISTRICT  
HARRISON COUNTY  
WEST VIRGINIA

### CONSTRUCTION SEQUENCE

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



Estimated Gross Material Balance (CY)			
Final Development - Gravel (CY)			
Pad	Cur	F/F	Stockpile
15,751	5,339		-34,568
Impoundment	47,954	14,732	33,217
Road	148	366	-816
Gravel	64,853	97,850	-2,187
Soil Adjustment for Aggregate Import			
Pad			2,338
Total Soil Balance:			
			161 Cu
Stripped Topsoil (Limit of Disturbance)			
Est. Soil Factor			14,627
Est. Soil Factor	(20%)		2,911
Est. Topsoil Stockpile Volume (Loose CY)			16,955
Minimum Total Stockpile Capacity, Required (CY)			17,019

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

Estimated Gravel Quantities (Placed CY)			
Gravel Quantities	# 5-1/2" Cement	# 3" Gravel Run	# 2 1/2" Gravel
	294	2,361	2,361
Est. Cost Chip & Seal (Placed CY)			1,277 sq.
Estimated Gravel (Placed CY)	3,469	1,300	4,769
Estimated Total Limit of Disturbance (Acres)			17,426
Estimated Impoundment Limit of Disturbance (Acres)			5,849
Estimated Well Pad & Road Limit of Disturbance (Acres)			11,577
Well Pad Plus Pre-Construction Disturbance (Acres)			1923.9

SHT. NO.	SHEET TITLE
1	TITLE SHEET
2A-2C	SITE LAYOUT PLANS
3	PAD & IMPOUNDMENT SECTIONS
4	ACCESS ROAD SECTIONS
5A-5F	GENERAL NOTES & DETAILS
6	RESTORATION PLAN
7	PROPERTY MAP

RECORD OWNER	RECORD LOT #	RECORD AREA OF LOT	AREA WITHIN LOD
HG ENERGY II APPALACHIA, LLC	20-444-11.2	95.05 AC.	17,426 AC.
TOTAL LIMIT OF DISTURBANCE			17,426 AC.

	LATITUDE	LONGITUDE
1209 PAD & IMPOUNDMENT ENTRANCE	N 39.1488526°	W 80.4408547°

WELL #	LAT.	LONG.
N-1H	N 39.147888°	W 80.443456°
N-2H	N 39.147938°	W 80.443458°
N-2K	N 39.147880°	W 80.443461°
N-4H	N 39.148163°	W 80.443470°
N-5H	N 39.148662°	W 80.443467°
N-6H	N 39.148621°	W 80.443464°
N-7H	N 39.148629°	W 80.442299°
N-8H	N 39.147958°	W 80.442296°
N-9H	N 39.147946°	W 80.442294°
N-10H	N 39.148570°	W 80.442302°
N-11H	N 39.148111°	W 80.442305°
N-12H	N 39.148152°	W 80.442308°

THIS PLAN IS SEPARATE AND SHOWN AS A "WELL" SHEET AND IS NOT TO BE USED IN CONNECTION WITH ANY OTHER PROJECT OR FOR ANY OTHER PURPOSE. THE REGISTERED PROFESSIONAL ENGINEER'S SEAL AND SIGNATURE ARE REQUIRED FOR THIS PLAN TO BE VALID. THE REGISTERED PROFESSIONAL ENGINEER'S SEAL AND SIGNATURE ARE REQUIRED FOR THIS PLAN TO BE VALID. THE REGISTERED PROFESSIONAL ENGINEER'S SEAL AND SIGNATURE ARE REQUIRED FOR THIS PLAN TO BE VALID.

REVISION	DATE	DESCRIPTION
1	5/23/18	ISSUE REVISION AND MODIFICATIONS PER PER COMMENTS
2	6/28/18	ADD DRAINAGE SWALES ALONG EXISTING DRAINAGE SWALES
3	6/12/18	IMPOUNDMENT PERFORMS ADJUSTED SITE BALANCE AND STORMWATER
4	7/25/18	MODIFICATIONS PER PER COMMENTS
5	10/27/18	ADDED WELLS TO IMPROVE VEGETATION AND STORMWATER CONTROL
6	10/17/18	MODIFICATIONS TO WELLS AND SWALES TO IMPROVE VEGETATION



TITLE SHEET  
HG 1209 PAD & IMPOUNDMENT  
UNION DISTRICT  
HARRISON COUNTY, WEST VIRGINIA

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

**WEST VIRGINIA 811** CALL BEFORE YOU DIG! Dial 811 or 800.245.4848

APPROVED SEP 05/23/2018  
CHECKED SEP 05/23/2018  
DESIGNED JUL 04/2018  
PROJECT NO. 4000-PA007715

DRAWING NUMBER  
PA007715-001  
SHEET 1

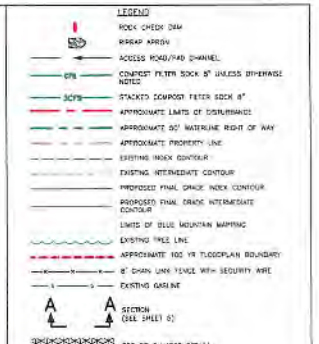
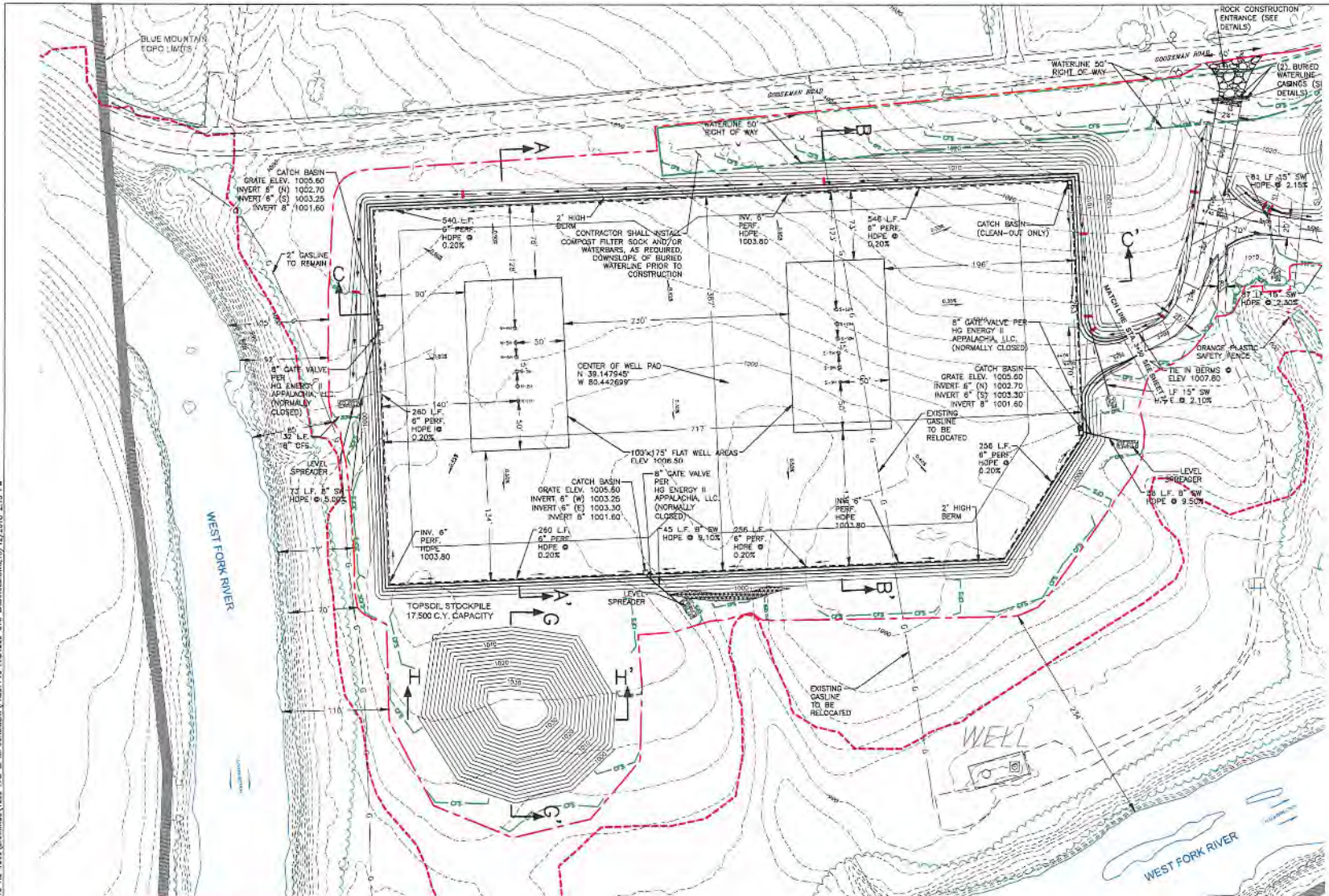
1. SERVICE UTILITY LINES ARE NOT SHOWN ON THIS PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, VERIFYING AND REPAIRING AS NECESSARY TO AVOID COLLISIONS.

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

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- WEST VIRGINIA GENERAL NOTES**
1. REFERENCE THIS DRAWING WITH THE CONSTRUCTION NOTES AND DETAILS.
  2. CONTRACTOR SHALL CONTACT WEST VIRGINIA UTILITIES PROTECTION SERVICE (WVUPS) AT A MINIMUM OF 2 BUSINESS DAYS PRIOR TO ANY WORK THAT MAY AFFECT OR INTERFERE WITH ANY OTHER UTILITIES LOCATED AT THE PROJECT SITE.
  3. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES WITH JURISDICTION OVER THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES WITH JURISDICTION OVER THE PROJECT SITE.
  4. NO EXISTING OR PROPOSED EROSION CONTROL MEASURES SHALL BE INSTALLED OR MAINTAINED UNLESS THEY ARE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE WEST VIRGINIA EROSION CONTROL ACT AND THE WEST VIRGINIA EROSION CONTROL REGULATIONS.
  5. EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL REMAIN IN PLACE UNTIL THE PROJECT IS COMPLETE AND THE SITE IS RESTORED TO ORIGINAL OR BETTER CONDITION.
  6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES WITH JURISDICTION OVER THE PROJECT SITE.
  7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES WITH JURISDICTION OVER THE PROJECT SITE.
  8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES WITH JURISDICTION OVER THE PROJECT SITE.
  9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES WITH JURISDICTION OVER THE PROJECT SITE.
  10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES WITH JURISDICTION OVER THE PROJECT SITE.

**REVISIONS**

REVISION	DATE	DESCRIPTION
1	8/23/16	ISSUED PERMITS AND MODIFICATIONS FOR EIP DOCUMENT
2	8/23/16	NO CHANGE REVISION, ADDED EXISTING CHANNELS AROUND STOCKPILE
3	8/12/16	AMPHIBIOUS REVISIONS, ADJUSTED SITE BALANCE AND STOCKPILE
4	7/27/16	MODIFICATIONS FOR EIP DOCUMENT
5	10/07/16	ADDED MODIFICATIONS TO THE EIP DOCUMENT
6	10/12/16	AMPHIBIOUS IS BUILT AND CONSTRUCTION ADDED NEARBY CHANNEL

SCALE - FEET  
0 50 100 150

**SITE DEVELOPMENT PLAN WITH EROSION AND SEDIMENTATION CONTROLS**  
HG 1209 PAD & IMPOUNDMENT  
UNION DISTRICT  
HARRISON COUNTY, WEST VIRGINIA

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

**APPROVED**  
**WVDEP OOG**  
10/16/2018

COORDINATES: UTM WITH NAD 83  
DATUM, ZONE 17, U.S. FOOT, CENTRAL

**WEST VIRGINIA** **CALL BEFORE YOU DIG!**  
Dial 811 or 800.245.4848  
www.UtilityofWestVirginia.com

APPROVED: MEP 05/23/2016  
CHECKED: MEP 05/23/2016  
DESIGNED: MEP 05/23/2016  
PROJECT NO.: 4000-PA007715  
DRAWING NUMBER: PA007715-001  
SHEET 28

**Penn E&R**  
Environmental Remediation, Inc.  
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