

west virginia department of environmental protection

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

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

Thursday, March 21, 2019 WELL WORK PERMIT Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC 5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for NEEL 1207 N-1H

47-033-05942-00-00

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: NEEL 1207 N-1H

Farm Name: HG ENERGY II APPALACHIA

U.S. WELL NUMBER: 47-033-05942-00-00

Horizontal 6A New Drill Date Issued: 3/21/2019

Promoting a healthy environment.

API Number: 4703305942

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

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

API Number: 4703305942

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, cessation of drilling, sending an email to DEPOOGNotify@wv.gov.



January 7, 2019

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

RE:

Area of Review - Neel 1207 Well Pad (N-1H to N-6H)

Hydraulic Fracturing Notice

Dear Sir:

HG Energy II Appalachia, LLC, is developing a Marcellus pad (Neel 1207 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 7200' TVD) and existing conventional natural gas wells.

HG Energy anticipates conducting hydraulic fracturing of the Neel 1207 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 (Neel 1207 N-1H). A plat for the well is attached.

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

1. Inspect surface equipment prior to fracturing to establish integrity and well conditions.

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

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

Sincerely,

Diane White

Diane White

Enclosure

Office of Oil and Gas

JAN 1 5 2019

Environmental Protes



January 7, 2019

Antero Resources 535 White Oaks Blvd Bridgeport, WV 26330

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Sincerely,

Diane White

Diane White

Enclosure

Office of Oil and Gas

JAN 1 5 2019

Environmental Protection



January 7, 2019

Alliance Petroleum Company 214 Warner Street Marietta, OH 45750

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Sincerely,

Diane White

Diane White

Enclosure

Office of Ch and Gas

JAN 15 2019

Environmental Protection



January 7, 2019

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

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Sincerely,

Diane White

Diane White

Enclosure



EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:

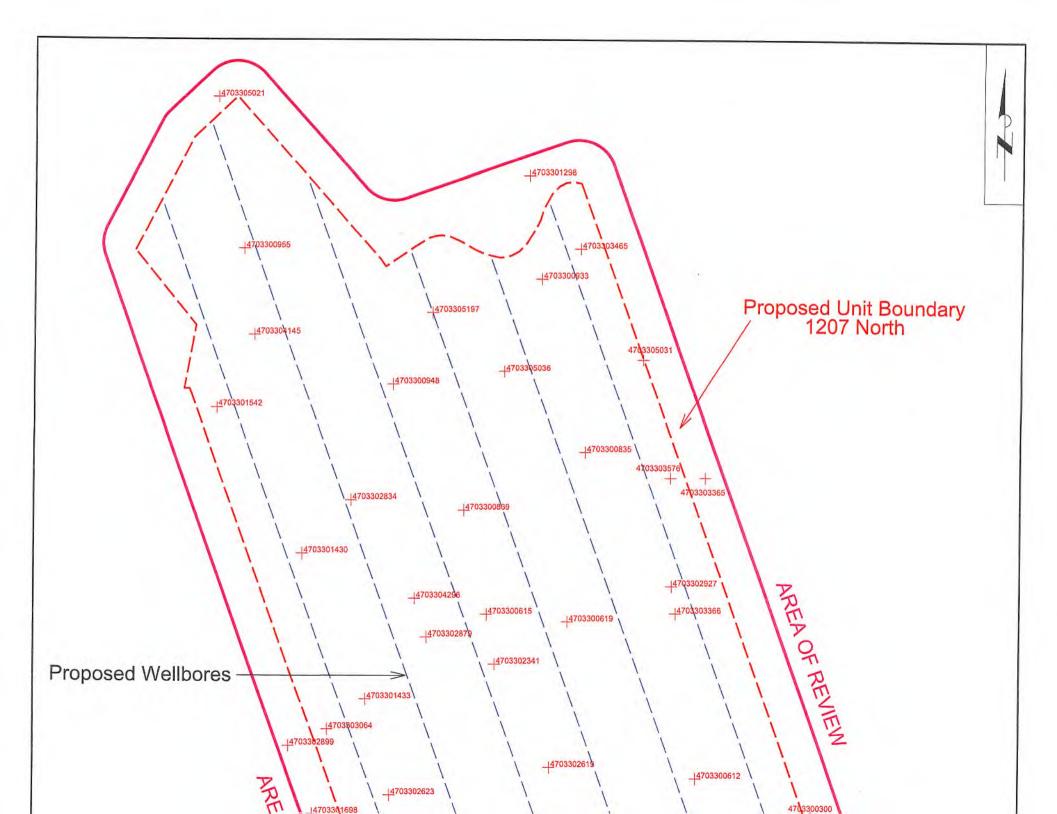
NUTTER 1207 NORTH UNIT AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H, N-5H & N-6H

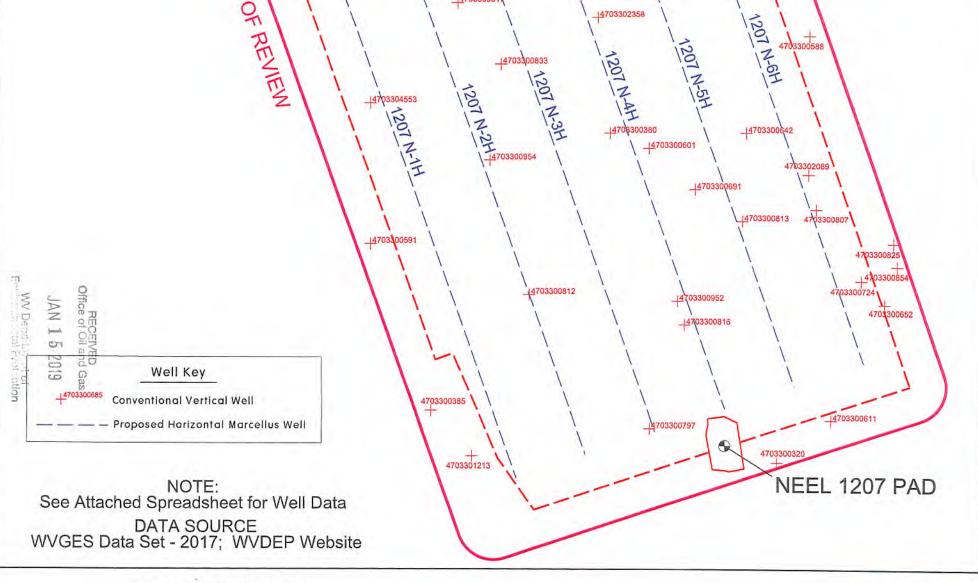
CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4703300300	HARRISON	C H Gaston 2 CW136	Dominion Energy Transmission Inc.	Fifty-foot	Storage	2050	PLUGGED	39.169238	-80.399969
2	4703300320	HARRISON	Dora B McWhorter	Dominion Energy Transmission Inc.	Gordon	Storage	2039	PLUGGED	39.151229	-80.399968
3	4703300380	HARRISON	C H Gaston	Dominion Energy Transmission Inc.	Gordon (undiff)	Storage	2094	ACTIVE	39.16371	-80.407981
4	4703300385	HARRISON	Gusman	UNKNOWN	Hampshire Grp	Storage	2337	PLUGGED	39.153261	-80.416667
5	4703300588	HARRISON	Petitto Brothers Inc	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4461	ACTIVE	39.167359	-80.398441
6	4703300591	HARRISON	William W Brodwater III	Dominion Energy Transmission Inc.	Benson	Gas	4488	ACTIVE	39.159553	-80.419511
7	4703300601	HARRISON	James L/Mary A Sellers	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4300	ACTIVE	39.16313	-80.406118
8	4703300611	HARRISON	Willard B/B Westfall	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4430	ACTIVE	39.152826	-80.397359
9	4703300612	HARRISON	WV Department of Nat Res	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4397	ACTIVE	39.170689	-80.405559
10	4703300615	HARRISON	Hiram Burnside	Dominion Energy Transmission Inc.	Benson	Gas	4295	ACTIVE	39.17693	-80.415622
11	4703300617	HARRISON	Linda J Maxwell Trust	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4440	ACTIVE	39.168657	-80.415249
12	4703300619	HARRISON	Carl Smith 1	Antero Resources Corporation	Benson	Gas	4282	ACTIVE	39.176639	-80.411709
13	4703300642	HARRISON	Charles H Gaston	Dominion Energy Transmission Inc.	UNKNOWN	NA		PLUGGED	39.16371	-80.401459
14	4703300652	HARRISON	R Bartlett CW628	Dominion Energy Transmission Inc.	Fifty-foot	Storage	2140	PLUGGED	39.157187	-80.394798
15	4703300691	HARRISON	C H Gaston CW126	Dominion Energy Transmission Inc.	Fifty-foot	Storage	2074	PLUGGED	39.161574	-80.403918
16	4703300724	HARRISON	A C Thrash CW235	Dominion Energy Transmission Inc.	Fifty-foot	Storage	1910	PLUGGED	39.158092	-80.395928
17	4703300797	HARRISON	A J Smith CW121	Dominion Energy Transmission Inc.	Greenland Gap Fm	Storage	2200	ACTIVE	39.152535	-80.406118
18	4703300807	HARRISON	Mae Gaston CW127	Dominion Energy Transmission Inc.	Greenland Gap Fm	Storage	2056	ACTIVE	39.160808	-80.398105
19	4703300812	HARRISON	Linda Maxwell Trust	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4539	ACTIVE	39.157615	-80.411895
20	4703300813	HARRISON	Mae Gaston CW125	Dominion Energy Transmission Inc.	Fifty-foot	Storage	2125	ACTIVE	39.160373	-80.401646
21	4703300816	HARRISON	Mae Gaston CW124	Dominion Energy Transmission Inc.	Fifty-foot	Storage	2150	ACTIVE	39.156454	-80.40444
22	4703300825	HARRISON	H T Edwards CW236	Dominion Energy Transmission Inc.	Fifty-foot	Storage	1881	ACTIVE	39.159502	-80.394379
23	4703300833	HARRISON	Cnsrvtn Com CW132	Dominion Energy Transmission Inc.	Thirty-foot	Storage	2002	ACTIVE	39.166323	-80.413199
24	4703300835	HARRISON	Vance Ward	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4521	ACTIVE	39.183026	-80.410777
25	4703300854	HARRISON	Rhonda Koutsobabis	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4410	ACTIVE	39.158631	-80.394192
26	4703300869	HARRISON	James G McWhorter	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4341	ACTIVE	39.180849	-80.416666
27	4703300933	HARRISON	Hiram Munday 3	EQT Production Co.	Benson	Gas	4465	ACTIVE	39.189588	-80.41283
28	4703300948	HARRISON	M S Ward	EQT Production Co.	Benson	Gas	4475	ACTIVE	39.185637	-80.42002
29	4703300952	HARRISON	Joseph D/Marva Shepherd	Dominion Energy Transmission Inc.	Benson	Gas	4595	ACTIVE	39.157348	-80.404757
30	4703300954	HARRISON	Linda J Maxwell Revocable Trust	Dominion Energy Transmission Inc.	Benson	Gas	4473	ACTIVE	39.162695	-80.413758
31	4703300955	HARRISON	Zina M Davis	Dominion Energy Transmission Inc.	Benson	Dry w/ Gas Show	4446	PLUGGED	39.190792	-80.427201
32	4703301213	HARRISON	J B Gusman	Dominion Energy Transmission Inc.	Benson	Oil and Gas	4560	ACTIVE	39.151519	-80.414689
33	4703301298	HARRISON	W E Wease	Alliance Petroleum Corporation	Greenland Gap Fm	Gas	4394	ACTIVE	39.193487	-80.413389
34	4703301430	HARRISON	H Burnside	Dominion Energy Transmission Inc.	Hampshire Grp	Storage	2232	ACTIVE	39.179252	-80.424493

EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR: NUTTER 1207 NORTH UNIT AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H, N-5H & N-6H

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
35	4703301433	HARRISON	James Maloney	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4648	ACTIVE	39.173737	-80.421512
36	4703301542	HARRISON	Stephen Hinkle	Ross & Wharton Gas Co.	Greenland Gap Fm	Gas	2799	ACTIVE	39.184786	-80.428592
37	4703301698	HARRISON	L Maxwell	Dominion Energy Transmission Inc.	Benson	Gas	4516	ACTIVE	39.169414	-80.424118
38	4703302089	HARRISON	Jeffrey O'Field	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4636	ACTIVE	39.162114	-80.398478
39	4703302341	HARRISON	WV Conservation CW-140	Dominion Energy Transmission Inc.	Thirty-foot	Observation	1768	ACTIVE	39.175043	-80.415248
40	4703302358	HARRISON	R S Hershey CW135	Dominion Energy Transmission Inc.	Thirty-foot	Observation	2000	ACTIVE	39.168076	-80.40854
41	4703302619	HARRISON	WV Con Com CW141	Dominion Energy Transmission Inc.	Gantz	Storage	1820	PLUGGED	39.171124	-80.41264
42	4703302623	HARRISON	R H Martin CW-133	Dominion Energy Transmission Inc.	Thirty-foot	Storage	1940	ACTIVE	39.170108	-80.420393
43	4703302834	HARRISON	McWhorter CW144	Dominion Energy Transmission Inc.	Fifty-foot	Storage	1797	ACTIVE	39.181255	-80.422103
44	4703302879	HARRISON	Burnside	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas w/ Oil Show	3041	PLUGGED	39.176085	-80.41853
45	4703302899	HARRISON	K M Patton/R Reed 1	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	3011	PLUGGED	39.171995	-80.425239
46	4703302927	HARRISON	Carl Smith (CW-143)	Dominion Energy Transmission Inc.	UNKNOWN	NA	10.0	PLUGGED	39.177945	-80.406677
47	4703303064	HARRISON	J Chevront (CW-154)	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	2933	PLUGGED	39.172605	-80.423373
48	4703303365	HARRISON	Carl V Smith Jr 4	Antero Resources Corporation	Benson	Gas	4575	ACTIVE	39.182031	-80.404998
49	4703303366	HARRISON	Carl V Smith Jr 5	Antero Resources Corporation	Benson	Gas	4605	ACTIVE	39.17693	-80.406491
50	4703303465	HARRISON	Rodney Combs	Dominion Energy Transmission Inc.	Hampshire Grp	Storage	2002	ACTIVE	39.190718	-80.410963
51	4703303576	HARRISON	Carl Smith (CW-151)	Dominion Energy Transmission Inc.	UNKNOWN	NA	3308	PLUGGED	39.182031	-80.406675
52	4703304145	HARRISON	Joseph H Workman 1	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4360	ACTIVE	39.187542	-80.426729
53	4703304296	HARRISON	Hiram Burnside	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	2942	PLUGGED	39.177535	-80.419089
54	4703304553	HARRISON	Linda J Maxwell	Dominion Energy Transmission Inc.	Misc Sands-BNSN/BRLR	Gas	4638	ACTIVE	39.164873	-80.419461
55	4703305021	HARRISON	Buffalo Lake Dev LLC	Alliance Petroleum Corporation	Greenland Gap Fm	Gas	4520	ACTIVE	39.196533	-80.428408
56	4703305031	HARRISON	Robert M Lewis	Dominion Energy Transmission Inc.	Greenland Gap Fm	Gas	4550	ACTIVE	39.186527	-80.407981
57	4703305036	HARRISON	Ward, Evelyn Marie	Dominion Energy Transmission Inc.	Benson	Gas	4460	ACTIVE	39.186108	-80.414657
58	4703305197	HARRISON	Evelyn Marie Ward	Dominion Energy Transmission Inc.	Huntersville Chert	Gas	6986	ACTIVE	39.188333	-80.418094

SOURCE: WVGES DATASET (2017) and WVDEP WEBSITE





Area of Review for:

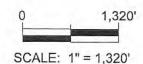
NEEL 1207 UNIT

Proposed 1207 N-1H Proposed 1207 N-2H Proposed 1207 N-3H Proposed 1207 N-4H Proposed 1207 N-5H Proposed 1207 N-6H

Grant & Union Districts, Harrison County, W.Va.

HG ENERGY, II APPALACHIA, LLC

5260 DuPont Road, Parkersburg, WV 26101





12/18/2018

API NO. 47-653-0 5003/22/2019
OPERATOR WELL NO. Neel 1207 N-1H
Well Pad Name: Neel 1207

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

1) Well Operator: HG E	Energy II Appa	alachia, L	494519932	Harrison	Union	West Milford 7.5'
40.15288 S \$1553854.1 (Operator ID	County	District	Quadrangle
2) Operator's Well Num	ber: Neel 1207	7 N-1H	Well P	ad Name: Nee	el 1207	
3) Farm Name/Surface C)wner: HG Energ	gy II Appalach	nia, LLC Public R	oad Access: _	lidden Valle	ey Rd @ SR 19
4) Elevation, current gro	und: 1354'	Ele	evation, propose	ed post-construc	ction: 1344	
5) Well Type (a) Gas Other	X	_ Oil	Un	derground Stor	rage	
(b)If Gas	s Shallow	X	Deep			SDW
	Horizontal	X				3/12/2019
6) Existing Pad: Yes or I						1000
7) Proposed Target Form					Pressure(s):	
Marcellus at 7208'/725	9' and 51' in thic	ckness. Ar	nticipated pressur	re at 4314#.		
8) Proposed Total Vertic	al Depth: 724	5'				
9) Formation at Total Ve		Marcellus	3			
10) Proposed Total Mea	sured Depth:	24,651'				
11) Proposed Horizontal	Leg Length:	16,096'				
12) Approximate Fresh	Water Strata De	epths:	135', 245', 42	5', 630'		
13) Method to Determin	e Fresh Water	Depths:	Nearest offset v	vell data		
14) Approximate Saltwa			3'			
15) Approximate Coal S				009'		
16) Approximate Depth						
17) Does Proposed well directly overlying or adj			ms Yes		No X	
(a) If Yes, provide Min	ne Info: Name	e:				
The second secon	Dept	h:				
	Seam	:				
	Own	er:				

WW-6B	
(04/15)	

API NO. 47-

OPERATOR WELL NO. Neel 1207 N-1H
Well Pad Name: Neel 1207

18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	New	LS	157.5	120'	120'	Drilled In
Fresh Water	20"	NEW	J-55	94	750'	750'	40% excess, yield =1.20,CTS
Coal/Storage	13 3/8"	NEW	J-55	68	2180'	2180'	40% excess yield = 1.20,CTS
Intermediate	9 5/8"	NEW	J-55	40	3000'	3000'	40% crosss yield Lead/0% Excess Tale
Production	5 1/2"	NEW	P-110	23	24651'	24651'	20% excess yield > 1 19, sail yield > 1 04
Tubing							
Liners							

SDW 3/12/2019

ТҮРЕ	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	30"	.500				Drilled In
Fresh Water	20"	24"	.438	2110	1200	Type 1, Class A	40 % excess yield = 1.20, CTS
Coal/Storage	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	Lead 40% excess, Tail 0% excess
Intermediate	9 5/8"	12 1/4"	.395	3950		Type 1/Class A	Lead 40% excess, Tail 0% Execut Leg
Production	5 1/2"	8 1/2"	.415	14520	12500	Type 1/ClassA	20% excess yield = 1.19, ball yield 1.04
Tubing							
Liners							

PACKERS

Kind:		
Sizes:		
Depths Set:		

WW-6B (10/14) API NO. 47-____ - U3/22/2U1

OPERATOR WELL NO. Neel 1207 N-1H

Well Pad Name: Neel 1207

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 7245 feet. Drill horizontal leg to estimated 16096 lateral length, 24,651 TMD. Hydraulically fracture stimulate and be capable of producing from the Marcellus Formation. Should we encounter an unanticipated void in the coal, we will install a minimum of 20' of casing below the void but not more than 100' below the void, set a basket and grout to surface. We plan to run an ECP above the Gantz/Dominion Storage interval to aid in sealing off and isolating the storage interval.

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

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

- 21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 28.278 acres
- 22) Area to be disturbed for well pad only, less access road (acres): 12.715 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, will aliab be nursing ECP for isolating storage zone
Lintermediate - Bow Spring on first 2 joints than every third joint to 100 from surface.
Intermediate - Bow Spring on first 2 joints than every third point to 100 from surface.
Froduction - Run 1 spring centralizer every 3 joints from the top of the curve
Production - Run 1 spring centralizer every 3 joints from the 100 ft the curve

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

Conductor -N/A, Casing to be diffied in will Dual Rotary Rig.
Fresh Water - 15.6 page PNE-1 + 376 barce CaC1, 40% Excess Yaid = 1.20, CTS
Fresh Water - 15.6 page PNE-1 + 2.5% barce CaC1, 40% Excess Yaid: 15.9 page PNE-1 + 2.5% barce CaC1 zero% Excess. CTS
Coal - Lead: 15.4 page PNE-1 + 2.5% barce CaC1, 40% Excess. Tail: 15.9 page PNE-1 + 2.5% barce CaC1 zero% Excess. CTS
Intermediate - Lead: 15.4 page PNE-1 + 2.5% barce CaC1, 40% Excess. Tail: 15.9 page PNE-1 + 2.5% barce CaC1 zero% Excess. CTS
Intermediate - Lead: 15.4 page PNE-1 + 2.5% barce CaC1, 40% Excess. Tail: 15.9 page PNE-1 + 2.5% barce CaC1 zero% Excess. CTS
Intermediate - Lead: 15.4 page PNE-1 + 2.5% barce CaC1 zero% Excess. CTS
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Intermediate - Lead: 15.4 page PNE-1 + 2.5% barce CAC1 zero% Excess. CTS
Intermediate - Lead: 15.4 page PNE-1 + 2.5% barce CAC1 zero% Excess. CTS
Intermediate - Lead: 15.4 page PNE-1 + 2.5% barce CAC1 zero% Excess. CTS
Intermediate - Lead: 15.4 page PNE-1 + 2.5% barce CAC1 zero% Excess. CTS
Intermediate - Lead: 15.4 page PNE-1 + 2.5% barce CAC1 zero% Excess. CTS
Intermediate - Lead: 15.4 page PNE-1 + 2.5% barce CAC1 zero% Excess. CTS
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Intermediate - Lead: 15.4 page PNE-1 + 2.5% barce CAC1 zero% Excess. CTS
Intermediate - Lead: 15.4 page PNE-1 + 2.5% barce CAC1 zero% Excess. CTS
Intermediate - Lead: 15.4 page PN

25) Proposed borehole conditioning procedures:

Conductor - Ensure the hole is clean at TD.

Frish Water - Once casing lest setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.

Fresh Water - 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 and at TD. Circulate a minimum of one hole volume prior to pumping cement.

Intermediate - Once casing is at setting depth, Circulate and condition and at TD. Circulate a minimum of one hole volume prior to pumping cement.

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WW Department of Environmental Protection

*Note: Attach additional sheets as needed.

Neel 1207 Well Pad (N-1H to N-6H, S-7H to S-12H) <u>Cement Additives</u>

Material Name	Material Type		CAS#		Taxa
		Premium NE-1 is a	Ingredient name	%	CAS number
		portland cement with	Portland cement	90 - 100	65997-15-1
		early compressive	Calcium oxide	1 - 5	1305-78-8 1309-48-4
		strength properties.	Magnesium oxide Crystalline silica: Quartz (SiO2)	0.1 - 1	14808-60-7
emium NE-1	Portland Cement		ar farming amore provide (page)	200	
		Commonly called gel, it is			
		a clay material used as a	Ingredient name	%	CAS number
		cement extender and to	bentonite	90 - 100	1302-78-9
		control excessive free	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7
		water.			
ntonite	Extender				
		A powdered, flaked or	Ingredient name	%	CAS number
		pelletized material used	Calcium chloride	90 - 100	10043-52-4
		to decrease thickening time and increase the rate	OBICION CHOICE	45 . 147	0.000
		of strength development			
lcium Chloride	Accelerator	or strength development			
icidiii ciiioride	Accelerator				
		Graded (3/8 to 3/4 inch)	Ingredient name	%	CAS number
		cellophane flakes used as	No hazardous ingredient		
		a lost circulation material.			
llo Flake	Lost Circulation				
		FP-13L is a clear liquid			
		organic phosphate			
		antifoaming agent used in	Ingradient name	%	CAS number
		cementing operations. It	Ingredient name	90 - 100	126-73-8
		is very effective	Tributyl phosphate	90 - 100	120-13-0
		minimizing air			
		entrapment and preventing foaming			
		tendencies of latex			
		systems.			
2-13L	Foam Preventer	- Jessends			
	, same restance				Tarker and the same of the sam
		The Management of the State of	Ingredient name	%	CAS number
o'einiside e	4.5.72	Used to retard cement	Sucrose	90 - 100	57-50-1
anulated Sugar	Retarder	returns at surface.			
		A proprietary product			
		that provides expansive properties and improves			
		bonding at low to	Ingredient name	%	CAS number
		moderate	Calcium magnesium oxide	90 - 100	37247-91-9
		temperatures.	Colored in agriculture Chice	30 - 100	0.2.7.01.0
-1					
		Multi-purpose polymer			
		additive used to control	Ingredient name	%	CAS number
		free fluid, fluid loss,		70	CAS number
		rheology, and gas	No hazardous ingredient		
PA-170	Gas Migration	migration.			
		A synthetic pozzolan,			
		(primarily Silicon Dioxide).			
		When blended with			
		cement, Pozzolan can be	Ingredient name	%	CAS number
		used to create	Crystalline silica: Quartz (SiO2)	5 - 10	14808-60-7
		lightweight cement	Calcium oxide	1-5	1305-78-8
		slurries used as either a		1	
		filler slurry or a sulfate resistant completion			
		resistant completion cement.			
z (Fly Ash)	Base	veinent.			RECEIVED Office of Oil and (
Trik smill	Dusc				Office of Oil and (
		A low temperature			13 AND 1 CALLED AND 1
		retarder used in a wide	Ingredient name	%	CAS Aumber 5 20
		range of slurry		40 - 50	
		formulations to extend	Organic acid salt	40 - 50	Trade secret.
		the slurry thickening time.			WV Department
3	Retarder	THE PROPERTY OF THE PROPERTY OF THE PARTY.			WV Department Environmental Prot
			Ingredient name	%	CAS number
			2-Butoxyethanol	20 - 30	111-76-2
			Proprietary surfactant	10 - 20	Trade secret.
		Used to water wet casing	D-Glucopyranose, oligomeric, C10-16-alkyl glycosides Alkylarylsulfonate amine sait	5 - 10	110615-47-9 Trade secret
	Surfactant	Used to water wet casing and formation to facilitate cement bonding.	D-Glucopyranose, oligomeric, C10-16-alkyl glycosides Alkylarylsulfonate amine salt Polyoxyalkylenes	5 - 10 1 - 5 0.1 - 1	110615-47-9 Trade secret. Trade secret.

List of Frac Additives by Chemical Name and CAS

Neel 1207 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
110111011		68607-28-3
		107-21-1
		111-76-2
		67-56-1
		107-19-7
Silica Sand and Ground Sand	Mixture	14808-60-7
Since Suria and Croama Suria	111111111	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
BIO CLLAIT 2000	Mixture	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
110 11011 202 11		68439-45-2
		2687-96-9
PROGEL - 4	9000-30-0	



1207 N-1H

Marcellus Shale Horizontal

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X=centralizers

						Harrison County, WV						
						1207 N	N-1H SH	L ₁	14	218623.46N 18097	H-0 - E	
Ground Elevation 1343'				1207	N-1H LE		14218022.1N 1806952.87E					
Azm		340.538°				1207 N	I-1H BH	IL.	14233192.62N 1801592.17E			
WELLBORE DIAGR	RAM	HOLE	CASING	GEOLOGY	ТОР	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS	
		30"	30" 157.5#				AIR	N/A, Casing to be drilled	N/A	Ensure the hole is clean at	Conductor casing = 0.5"	
x x	x	00	LS	Conductor 0 120 in w/ Dual Rotary Rig		TD.	thickness					
		. 1 2 1	100					15.6 ppg PNE-1 + 3% bwoc CaCl 40% Excess	Centralized every 3	Once casing is at setting depth, circulate a minimum	Surface casing = 0.438"	
	x	24"	20" 94# J-55	Fresh Water	0	135			joints to surface	of one hole volume with	thickness	
	x			Fresh Water	0	850			Fresh Water prior to pumping cement.	Burst=2110 psi		
				Kittaning Coal	1004	1009		Lead: 15.4 ppg PNE-1 +	Bow Spring on every	Once casing is at setting	Intermediate casing = 0.480	
			13-3/8" 68#	Little/Big Lime	1527 / 1569	1539 / 1619	619 AIR / KCL - 2.5% bwoc Cacl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc Cacl	40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc	joint "will also be running ECP for isolating	depth, Circulate and condition at TD. Circulate a minimum of one hole yolume prior to pumping		
x x x	x	17.5"	J-55 BTC	Injun / Gantz (Storage)	1627 / 1957	1737 / 2027					wall thickness Burst=3450 psi	
				Intermediate 1	0	2180		storage zone*	cement.			
	x			Fifty / Thirty Foot	2066 / 2157	2126 / 2167	7			Once casing is at setting		
				Gordon Stray / Gordon	2193 / 2253	2253 / 2440	AIR / KCL		Bow Spring on first 2	depth, Circulate and	Intermediate casing = 0.3	
		12.25"	9-5/8" 40# J-55 BTC	5th Sand	2500	2512	Salt	40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc		condition mud at TD. Circulate a minimum of one	wall thickness	
	×			Bayard / Warren	2566 / 2866	2576 / 2906	Polymer	CaCI		hole volume prior to	Burst=3950 psi	
				Intermediate 2	0	3000		zero% Excess. CTS		pumping cement.		
x x	SCAIL.			Speechley	3186	3206		9.0ppg SOBM <u>Lead</u> : 14.5 ppg POZ:PNE-1 + 0.3%	Run 1 spiral centralizer every 5 joints from the top of the curve to surface.			
		O FRANCISCO		Balltown	3413	3423						
		8.5" Vertical		Benson	4504	4519						
				West Falls	4970	6215		bwoc R3 + 1% bwoc				
				Rhinestreet	6215	6290		EC1 + 0.75 gal/sk FP13L + 0.3% bwoc		Once on bottom/TD with casing, circulate at max		
				Cashaqua	6290	6491		MPA170		allowable pump rate for at	Production casing = 0.4	
x x		1	5-1/2" 23#	Middlesex	6491	6571	11.5ppg-	<u>Tail</u> : 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75		least 2x bottoms up, or until returns and pump	wall thickness Burst=14520 psi	
		8.5" Curve		West River	6571	6664	12.5ppg	gal/sk FP13L + 50%	F	pressures indicate the hole	Note:Actual centralize	
			CDC HTQ	Burkett	6664	6690	SOBM	bwoc ASCA1 + 0.5% bwoc MPA170	Run 1 spiral centralizer every 3 joints from the	is clean. Circulate a minimum of one hole	schedules may be chang due to hole conditions	
				Tully Limestone	6690	6794		20% Excess	1st 5.5" long joint to the			
		6.64		Hamilton	6794	7208		Lead Yield=1.19 Tail Yield=1.94	top of the curve.	cement.		
				Marcellus	7208	7259	11 Enna	CTS				
		8.5" Lateral		TMD / TVD (Production)	24651	7245	11.5ppg- 12.5ppg SOBM					
x x				Onondaga	7259		000					

API	Number	4/-	
	1 1000	untawa 1	Mall Ma

Operator's Well No. Neel 1207 N-1H

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

Operator Name HG Energy II Appalachia, LLC	OP Code 494501907
Watershed (HUC 10) Middle West Fork Creek	Quadrangle West Milford 7.5'
Do you anticipate using more than 5,000 bbls of water to comp	
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:	-AW
Land Application Underground Injection (UIC Permit Reuse (at API Number TBD - At next a Off Site Disposal (Supply form WW Other (Explain	anticipated well
Will closed loop system be used? If so, describe: Yes, cuttings and fi	luids will be collected in a closed loop system, re-used or hauled to an approved disposal site or landfill.
Drilling medium anticipated for this well (vertical and horizont	
-If oil based, what type? Synthetic, petroleum, etc. Sy	
Additives to be used in drilling medium? Water, Soap, KCI, Barit	
Drill cuttings disposal method? Leave in pit, landfill, removed	
-If left in pit and plan to solidify what medium will be	
-Landfill or offsite name/permit number? See Attached	
Permittee shall provide written notice to the Office of Oil and C West Virginia solid waste facility. The notice shall be provided where it was properly disposed.	Gas of any load of drill cuttings or associated waste rejected at any distribution within 24 hours of rejection and the permittee shall also disclose
on August 1, 2005, by the Office of Oil and Gas of the West Vi provisions of the permit are enforceable by law. Violations o law or regulation can lead to enforcement action. I certify under penalty of law that I have personally application form and all attachments thereto and that, base	y examined and am familiar with the information submitted on this ed on my inquiry of those individuals immediately responsible for true, accurate, and complete. I am aware that there are significant
Company Official Signature Diane White	Section 2
Company Official (Typed Name) Diane White	RECEIVE Office of Oil a
Company Official Title Agent	JAN 15
Subscribed and sworn before me this 5th day of D	Oecember , 20 18 WV Departm Environmental I
641 Sle	Notary Public Notary Public Notary Public State Of Mark J Schuller Hig Energy Li

Operator's Well No. Neel 1207 N-1H

HG Energy II Appalachia, LLC Proposed Revegetation Treatment: Acres Disturbed 28.602 Prevegetation pH 3 Tons/acre or to correct to pH 6.5 Fertilizer type 10-20-20 lbs/acre Fertilizer amount Hay 2 Tons/acre Mulch Seed Mixtures Temporary Permanent Seed Type lbs/acre Seed Type lbs/acre Tall Fescue Tall Fescue 40 40 Ladino Clover 5 Ladino Clover 5 Maintain E&S controls through the drilling and completion process 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: Oil & Gas Inspector

) Yes

Field Reviewed?

Date: 1/4/2019

Cuttings Disposal/Site Water

Cuttings -Haul off Company:

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

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

Environmental Coordination Services & Recycling (ECS&R) E287 US Highway 19 Cochranton, PA 16314 814-425-7778

Disposal Locations:

Apex Environnemental, LLC Permit # 06-08438 11 County Road 78 Amsterdam, OH 48903 740-548-4889

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

Sycamore Landfill Inc. Permit #R30-079001 05-2010 4301 Sycamore Ridge Road Hurricane, WV 25526 304-562-2611

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

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

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

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

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

Waste Management Meadowfill Permit # 1032 1.488 Dawson Drive Bridgeport, WV 26330

Brooke County Landfill Permit # SWF-103-97 / WV 0109029 Rd 2 Box 410 Colliers, WV 26035 304-748-0014 03/22/2019

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Adams #2 (Buckeye Brine, LLC) 2205 Westover Road Austin Tx 78703 Permit # 34-081-2-7178 740-575-4484 512-478-6545

Adams #3 (Buckeye Brine, LLC) Permit #84-031-2-7241-00-00 2530 Exposition, Sulte 117 Austin, TX 78703 512-478-6545

Mozena #1 Well (SWIW # 18) Permit # 34-157-2-5511-00-00 5367 E. State Street Newcomerstown, OH 48832 740-768-3966

Goff SWD #1 (SWIW # 27) Permit # 34-119-2-8776-000 300 Cherrington Pkwy, Suite 200 Coraopolis, PA 15108 412-829-7275

SOS D#1 (SWIW #12)
Permit # 84-059-2-4202-00-00
Silcor Olifield Services, Inc.
2939 Hubbard Road
Youngstown, PH 44505

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

OH UIC #1 Bu keye UIC Barnesville 1 & 2 CNX Gas Con...:any, LLC 1000 Consol Energy Drive Permit # 34-013-2-0609-00-00 Permit # 34-013-2-0614-00-00 304-323-6568

03/22/2019

US Steele 11385 Permit # 47-001-00561 200 Evergreen Drive Waynesburg, PA 15730 304-828-6568

Chapin #7 UIC (SWIW #7)
Permit # 84-083-2-4187-00-00
Elkhead Gas& Oil Company
12163 Marne Rd. NE
Newark, OH 43055
740-768-3966

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HG Energy II Appalachia, LLC

Site Safety Plan

Neel 1207 Well Pad 104 Hidden Valley Rd Jane Lew Harrison County, WV 26378

December 2018: Version 1

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

5 PW

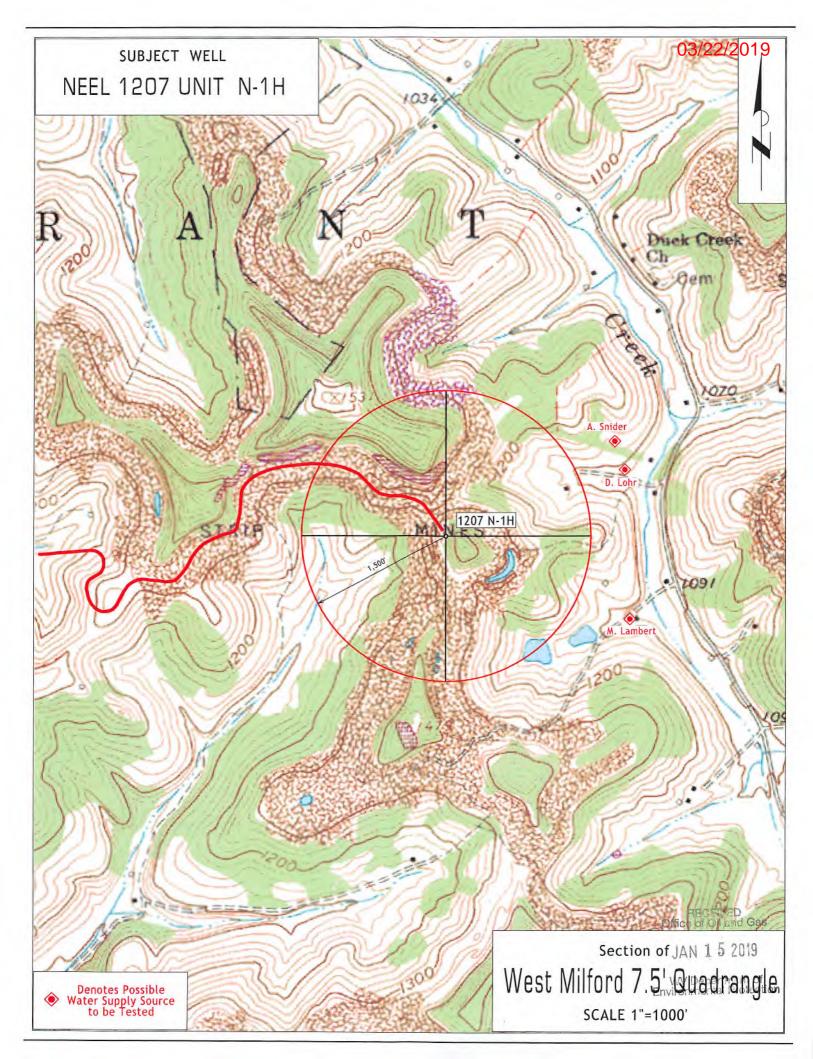
HG Energy II Appalachia, LLC

5260 Dupont Road

Parkersburg, WV 26101

Office of Oil and Gas

JAN 1 5 2019



Diane White

From: Diane White

Sent: Wednesday, December 19, 2018 5:07 PM

To: Vickie Hoops (vhoops@sturmenvironmental.com)

Subject: 1207 Well Pad WSW Owners to be Tested **Attachments:** NEEL 1207 TOPO AND REC PLAN.pdf

Vicki,

Good afternoon. Listed below are three people who we believe have water at about 2000' from the Neel 1207 well pad. Could you please have their water sampled and a pre-drill analysis

run? Please have the paperwork identified as the Neel 1207 Well Pad.

This is in Harrison county, Grant district, the West Milford quadrangle. I've attached a topo and rec plan which should help identify the area. If you need more information please let me know.

Thanks, Diane

From: Timothy Roush

Sent: Wednesday, December 19, 2018 11:53 AM **To:** Diane White dwhite@hgenergyllc.com

Subject: 1207 WSW Owners

The WSW Owners for 1207 are:

SNIDER, ANTHONY D 29 POST OFFICE DR. LOST CREEK, WV 26385

LOHR, DAVID W 74 JUNE BUG DR. LOST CREEK, WV 26385

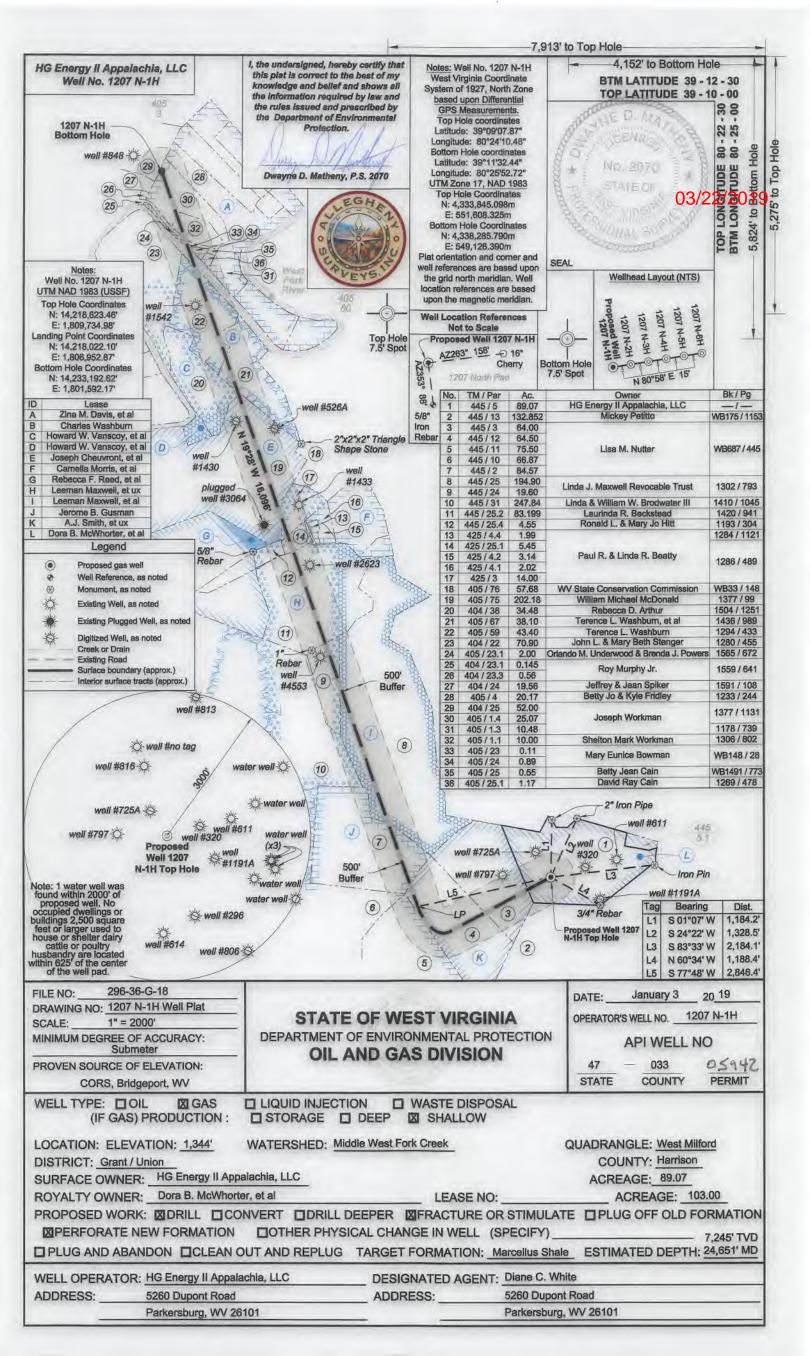
LAMBERT, MARTHA E 4062 DUCK CREEK RD. LOST CREEK, WV 26385

Timothy P. Roush, PS

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

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JAN 1 5 2019



WW-6A1 (5/13)

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

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:	Accountant		

HG Energy II Appalachia LLC

1207N - 1H LEASE CHAIN

	LEGACY LEASE	TAVAGAD	LEACE NUMBER	CDANTOD/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE
TRACT #	NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROTALIT	DEED BOOK	PAGE
				DORA B. MCWHORTER, SIDOW, EVERETT EDMONDS AND GLADYS		NOT LESS THAN 1/9	010	
				EDMONDS, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	819	
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	903 1136	
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT		
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51 58	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	1522	
1	LC068480	12-0445-0005-0000	Q100813000	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT		
	1 2000	12-0445-0005-0001	425552555	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	
			1	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	12
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
						SECOND AMENDMENT TO MEMORANDUM OF		
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601	. 58
		20-0405-0001-0000						1
		20-0405-0001-0001		ZINA M. DAVIS AND WILLIAM L. DAVIS, HER HUSBAND; RALPH R.	i			
•		20-0405-0001-0002		SOMMERVILLE AND GOLDIE A. SOMMERVILLE, HIS WIFE; WILLIAM H.				
		20-0405-0001-0003		SIMPSON AND JACQUELINE W. SIMPSON, HIS WIFE; ZELLA W.		İ		
		20-0405-0001-0004		SOMMERVILLE, WIDOW, MILDRED L. SOMMERVILLE, BY ROBERT L.				
		20-0405-0002-0000		SOMMERVILLE, GUARDIAN; ROBERT L. SOMMERVILLE AND JANET W.				
		20-0405-0003-0000		SOMMERVILLE, HIS WIFE	CONSOLIDATED GAS SUPPLY COMPANY	NOT LESS THAN 1/8	934	. 3
		20-0405-0004-0000		CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	25
		20-0405-0004-0001		CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	
		20-0405-0005-0000		CNG TRANSMISSION CORPORATION	GAS EXPLORATION AND DEVELOPMENT COMPANY	CONFIRMATORY ASSIGNMENT	1285	31
	,	20-0405-0006-0000		GAS EXPLORATION AND DEVELOPMENT COMPANY	DOMINION APPALACHIAN DEVELOPMENT, INC.	MERGER/NAME CHANGE	wvsos	
Α	FK076735	20-0405-0006-0001	Q100999000	CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	36
		20-0405-0006-0002		DOMINION APPALACHIAN DEVELOPMENT, INC.	DOMINION APPALACHIAN DEVELOPMENT, LLC	MERGER/NAME CHANGE	wvsos	
	}	20-0405-0023-0000		DOMINION APPALACHIAN DEVELOPMENT, LLC	DOMINION TRANSMISSION, INC.	ASSIGNMENT	1457	108
		20-0405-0023-0001		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	. 3
	·	20-0405-0024-0000		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	123
		20-0405-0025-0000		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	12
		20-0405-0025-0001		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	94
		20-0405-0026-0000		NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	
		20-0405-0026-0001		DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	wvsos	
	1	20-0405-0026-0002				SECOND AMENDMENT TO MEMORANDUM OF		
	ŀ	20-0405-0026-0002		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601	58
	 	25 0 405 0020 0005		CHARLES H. WASHBURN	RESERVE GAS COMPANY	NOT LESS THAN 1/8	179	48

В	LC052812	12-0405-0059-0000 12-0405-0067-0000	Q100958000	RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC.	HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC.	CONFIRMATORY DEED CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	508 903 1136 51 58 1522 1543 1576 1584 1600 WVSOS	573 179 250 795 362 33 1235 125 942 692
		<u> </u>		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	176	182
				LEEMAN MAXWELL AND MARY C. MAXWELL, HIS WIFE	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	903	179
			-	HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SOFFET CORFORATION CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
	*	p/o 12-0425-0025-0000,		CONSOLIDATED GAS SUPPLY CORPORATION		MERGER/NAME CHANGE	51	795
		12-0425-0025-0001		CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION		58	362
		p/o 12-0425-0025-0002,	i	CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE		302
		12-0425-0025-0004		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
Н	LC014206	p/o 12-0425-0031-0000,	Q101050000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
		12-0425-0003-0000,		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576 1584	125 942
ļ		12-0425-0024-0000		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT		692
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600 WVSOS	692
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF	WV303	
				DOLANICON ENERGY TRANSPASSION, INC	LIC ENERGY II ARRALACHIA LLC	FARMOUT AGREEMENT	1601	581
1	<u> </u>			DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC		176	144
		l .		LEEMAN MAXWELL AND MARY C. MAXWELL, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8 ASSIGNMENT (OIL)	UNRECORDED	144
				•	SOUTH PENN OIL COMPANY	LUDOIGININITIA (OIL)	CHAUFCOUDED	
					COLITH DENIN MATLIDAL GAS COMPANY	ASSIGNMENT	LINRECORDED	
					SOUTH PENN NATURAL GAS COMPANY	ASSIGNMENT ASSIGNMENT	UNRECORDED	
				SOLITH DEANN OIL COMPANY	SOUTH PENN OIL COMPANY	ASSIGNMENT	UNRECORDED	
				SOUTH PENN OIL COMPANY SOUTH PENN NATURAL GAS COMPANY	SOUTH PENN OIL COMPANY PENNAOIL COMPANY	ASSIGNMENT MERGER/NAME CHANGE	UNRECORDED WVSOS	542
				SOUTH PENN NATURAL GAS COMPANY	SOUTH PENN OIL COMPANY PENNAOIL COMPANY SOUTH PENN OIL COMPANY	ASSIGNMENT MERGER/NAME CHANGE ASSIGNMENT	UNRECORDED WVSOS 754	542 539
					SOUTH PENN OIL COMPANY PENNAOIL COMPANY	ASSIGNMENT MERGER/NAME CHANGE	UNRECORDED WVSOS	542 539

I	1	p/o 12-0425-0025-0000,		CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
'	LC014208	p/o 12-0425-0025-0002	Q101116000	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	692
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	wvsos	
						SECOND AMENDMENT TO MEMORANDUM OF		
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601	581
				A.J. SMITH AND L.F. SMITH, HIS WIFE	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	193	297
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	903	179
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
				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	692
				DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
						MEMORANDUM OF AMENDED AND RESTATED		
	İ	1		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	LEASE	1601	563
		1				SECOND AMENDMENT TO MEMORANDUM OF		
К	LC094208	12-0445-0003-0000	Q101052000	DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601	581
		12-0445-0012-0000						
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC AND NOBLE ENERGY, INC.	NOT LESS THAN 1/8	1551	969
				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
				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	
						MEMORANDUM OF AMENDED AND RESTATED		
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	LEASE	1601	563
						SECOND AMENDMENT TO MEMORANDUM OF		
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601	581
				HOWARD W. VANSCOY AND RESSIE C. VANSCOY ET AL	CONSOLIDATED GAS SUPPLY CORPORATION	NOT LESS THAN 1/8	999	281
]	İ		CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
		l		CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
	1	j i		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
1	1,005,3000	17 12 0404 0029 0000 070		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1245
С	LC052808	17-12-0404-0038-0000; P/O	Q1004040000	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
	(LC07220)	12-404-0022.0000		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
	1			NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	660
1	1			NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692

1		1		DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	wvsos	
						SECOND AMENDMENT TO MEMORANDUM OF		
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	160	
				HOWARD W. VANSCOY AND RESSIE C. VANSCOY ET AL	CONSOLIDATED GAS SUPPLY CORPORATION	NOT LESS THAN 1/8	99	
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	113	
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	5	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	5	8 36
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	152	2 3
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	154	3 124
D	LC072201	17-12-404-0056-0000 AND	Q100712000	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	157	6 12
		P/O 17-12-404-0038-0000		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	158	4 94
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	160	0 66
ŀ				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	160	0 69
Į.		l		DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	wvsos	
						SECOND AMENDMENT TO MEMORANDUM OF		
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	160	1 58
		17-12-0405-0075, 12-424-		JOSEPH CHEUVRONT ET AL	P. H. GAFFNEY	NOT LESS THAN 1/8	18	4 30
		0004, 12-424-0018, 12-424-		JOSEI II GILOVRONI EI AL	T.H. GALLIE	1101 2233 117 117 27 3	1	
		0018.2, 12-4240018.3, 12-		F.E. WILLIAMSON AND P.H GAFFNEY, DBA F.E. WILLIAMSON & CO.	J.F. DONALDSON	ASSIGNMENT	22	2 8
		424-0018.4, 12-424-0018.5,		J. F. DONALDSON	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	22	
		12-424-0019, 12-424-0019.1,		THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPNAY	ASSIGNMENT	23	
		12-424-0019, 12-424-0019.1,		PITTSBURGH AND WEST VIRGINA GAS COMPNAY, PHILADELPHIA OIL	FITTSBORGITAND WEST VIRGINIA GAS CONFINAT	ASSIGNMENT		11
		12-424-0020, 12-424-0021.2,		COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT/BENSON SAND AND ABOVE	50	4 35
		12-424-0024, 12-424-0025,		PITTSBURGH AND WEST VIRGINA GAS COMPNAY, PHILADELPHIA OIL	HOPE IVATORAE GAS COMPANT	ASSIGNMENT/BENSON SAND AND ABOVE	30	33.
		12-424-0024, 12-424-0025, 12-424-0026.1,		COMPANY	EQUIATABLE GAS COMPANY	ASSIGNMENT	71	4 15
				EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT/BELOW BENSON SAND	71	
	LC098343	12-424-0026.2, 12-424- 0026.3, 12-424-0026.4, 12-		HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	90	
-		424-0026.5, 12-424-0026.6,	Q100524000	CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS SOFFET CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	113	
E	(LC021483)	12-424-0026.7, 12-424-26.8,	Q100324000	CONSOLIDATED GAS SOPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	5	
	(LC052212)			CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	5	
		12-424-0027, 12-424-0027.1.		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	152	
		12-424-0028, 12-424-0028.1,		· · · · · · · · · · · · · · · · · · ·	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	154	
1		12-424-0029, 12-424-0029.1,		CNX GAS COMPANY LLC	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (30%)	157	
		12-424-0030, 12-424-0030.1,		DOMINION TRANSMISSION, INC.	the state of the s	ASSIGNMENT (52%)	158	
		12-424-0045.1, 12-424-		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	150	
		0045.2, 12-424-0045.5, 12-		NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	160	
		424-0045.6, 12-424-0045.7,		NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	MERGER/NAME CHANGE		09.
		12-424-0045.8, 12-424-0046,		DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	SECOND AMENDMENT TO MEMORANDUM OF	wvsos	
		12-424-0053, 12-424-0053.1,		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	160	1 58:
ļ		12-424-0053.2, 12-424-		·				1
		1		REBECCA F. REED ET AL	HOPE NATURAL GAS COMPANY	NOT LESS THAN 1/8	82	
		1		HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	MERGER/NAME CHANGE	90	
1				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT		
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	5	
		1		CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	5	
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY, LLC	MEMORANDUM FARMOUT AGREEMENT	152	
G	FK068582	17-12-0405-0075-0000	Q100734000	CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	154	
		17-12-0425-0001-0000	-,	DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	157	
	1			CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	158	
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	160	
l i		1		NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	160	0 69:

	l	1 1		DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
						SECOND AMENDMENT TO MEMORANDUM OF		
		1		DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601	581
				J.B. GUSMAN AND ADALINE GUSMAN	TREAT AND CRAWFORD	NOT LESS THAN 1/8	158	8
	1	i		TREAT AND CRAWFORD	UNITED FUEL GAS COMPANY	ASSIGNMENT	226	359
	ł	17-20-0444-0011-0000,		UNITED FUEL GAS COMPANY	FAYETTE COUNTY GAS COMPANY	ASSIGNMENT	UNRECORDED	
		17-20-0444-0011-0001,		FAYETTE COUNTY GAS COMPANY	HOPE NATURAL GAS	ASSIGNMENT	201	3
		17-20-0444-0011-0002,		HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY COMPANY	MERGER/NAME CHANGE	903	179
		17-20-0444-0011-0003,		CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	1136	250
		17-20-0444-0012-0000,		CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
		17-12-0444-0013-0000,		CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	58	362
		17-12-0444-0014-0000,	Q100370000	DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1409	680
j	FK020606	17-12-0444-0021-0000,	Q100370000	DOMINION TRANSMISSION, INC.	DOMINION EXPLORATION & PRODUCTION, INC.	ASSIGNMENT	1442	356
		17-12-0444-0021-0001,		DOMINION EXPLORATION & PRODUCTION, INC.	DOMINION TRANSMISSION, INC.	ASSIGNMENT	1457	978
		17-12-0444-0022-0000,		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM FARMOUT AGREEMENT	1522	33
		17-12-0445-0001-0000,		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	1543	1235
		17-12-0445-0002-0000,		DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	1576	125
		17-12-0445-0009-0000,		CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	1584	942
		17-12-0445-0010-0000,		NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	1600	692
	1	17-12-0445-0011-0000		DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
		1				SECOND AMENDMENT TO MEMORANDUM OF		
	1			DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	FARMOUT AGREEMENT	1601	581



January 7, 2019

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

RE:

Drilling Under Roads - Neel 1207 N-1H

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 or 304-420-1119.

Very truly yours,

Diane White

Diane C. White

Enclosures

RECEIVED Gas

JAN 1 5 2019

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

	ce Certification: 01/08/2019			API No. 4		
				Operator's	Well No. Neel	1207 N-1H
					Name: Neei 120	
Notice has	heen given:					
Pursuant to the	ne provisions in West Virginia Code	e § 22-6A, th	ne Operator has pro	ovided the red	quired parties v	with the Notice Forms listed
	tract of land as follows:	3 - 7	I · F	-		
State:	West Virginia		T 1773 / 3 T A T 3 0 2	Easting:	551608.3	
County:	Harrison		UTM NAD 83	Northing:	4333845.1	
District:	Union		Public Road Ac	cess:	SR19/Hidden Val	lley Road
Quadrangle:	West Milford		Generally used:	farm name:	Hubert E & Sand	ra K Neel
Watershed:	Middle West Fork Creek					
it has provid information r of giving the requirements Virginia Cod	the secretary, shall be verified and ed the owners of the surface desc- equired by subsections (b) and (c), surface owner notice of entry to of subsection (b), section sixteen e § 22-6A-11(b), the applicant shall have been completed by the applic	ribed in sub section sixte survey pursu of this artic I tender proo	divisions (1), (2) en of this article; (nant to subsection ele were waived in	and (4), substill that the re (a), section a writing by	section (b), sec quirement was ten of this artic the surface ow	ction ten of this article, the deemed satisfied as a result cle six-a; or (iii) the notice wner; and Pursuant to West
Pursuant to	West Virginia Code § 22-6A, the C		attached proof to	this Notice C	ertification	
that the Ope	rator has properly served the requi ECK ALL THAT APPLY	red parties w				OOG OFFICE USE ONLY
that the Ope		or 🔳 NOI	vith the following:	RED BECA	USE NO	
that the Ope	ECK ALL THAT APPLY	or I NOT SEISMIC	rith the following: TICE NOT REQUIC CACTIVITY WA	RED BECA S CONDUC	USE NO TED	ONLY RECEIVED/
*PLEASE CH	ECK ALL THAT APPLY FICE OF SEISMIC ACTIVITY O	or NOT SEISMIC RVEY or C r NOTICE	rith the following: TICE NOT REQUIC CACTIVITY WA	RED BECA S CONDUC /EY WAS C IRED BECA	USE NO TED ONDUCTED USE	ONLY RECEIVED/ NOT REQUIRED
*PLEASE CH	ECK ALL THAT APPLY TICE OF SEISMIC ACTIVITY OF	SEISMIC SEISMIC RVEY or NOTICE WAS CO	TICE NOT REQUICE ACTIVITY WA NO PLAT SURVITCE NOT REQUICE NOT REQUICE OF ENTRY FOR	RED BECANS CONDUCTORY WAS CONDUCTORY WAS CONDUCTORY WAS CONTRED BECANDED BECANDED BY SURFA	USE NO TED ONDUCTED USE VEY	ONLY RECEIVED/ NOT REQUIRED RECEIVED RECEIVED/
*PLEASE CH	ECK ALL THAT APPLY TICE OF SEISMIC ACTIVITY OF	or NOTICE WAS CO	TICE NOT REQUICACTIVITY WA NO PLAT SURVITICE NOT REQUICE NOT REQUICE OF ENTRY FOR ENDUCTED OF	RED BECANS CONDUCTORY WAS CONDUCTORY WAS CONDUCTORY WAS CONTRED BECANDED BECANDED BY SURFA	USE NO TED ONDUCTED USE VEY	ONLY RECEIVED/ NOT REQUIRED RECEIVED RECEIVED/
that the Ope *PLEASE CH 1. NO 2. NO 3. NO	ECK ALL THAT APPLY TICE OF SEISMIC ACTIVITY OF TICE OF ENTRY FOR PLAT SUF	or NOTICE WAS CO	TICE NOT REQUICACTIVITY WA NO PLAT SURVITICE NOT REQUICE NOT REQUICE OF ENTRY FOR ENDUCTED OF	RED BECANS CONDUCTORY WAS CONDUCTORY WAS CONDUCTORY WAS CONTRED BECANDED BECANDED BY SURFA	USE NO TED ONDUCTED USE VEY	ONLY RECEIVED/ NOT REQUIRED RECEIVED RECEIVED/ NOT REQUIRED

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.

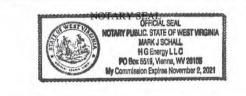
Certification of Notice is hereby given:

 Well Operator:
 HG Energy II Appalachia, LLC
 Address:
 5260 Dupont Road

 By:
 Diane White
 Parkersburg, WV 26101

 Its:
 Accountant
 Facsimile:
 304-863-3172

 Telephone:
 304-420-1119
 Email:
 dwhite@hgenergyllc.com



Subscribed and sworn before me this 8th day of January, 2019 .

Notary Public

My Commission Expires (1/2/2021

Oil and Gas Privacy Notice:

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

Office of Oil and Gas

JAN 1 5 2019

WV Department of Environmental Frotection

WW-6A (9-13)

Address: 5260 Dupont Road

Parkersburg, WV 26101

API NO. 47-_____ - _____ 03/22/2019
OPERATOR WELL NO. Neel 1207 N-1H
Well Pad Name: Neel 1207

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: 01/08/2019 Date Permit Application Filed: 01/10/2019 Notice of: PERMIT FOR ANY ☐ CERTIFICATE OF APPROVAL FOR THE WELL WORK CONSTRUCTION OF AN IMPOUNDMENT OR PIT Delivery method pursuant to West Virginia Code § 22-6A-10(b) ☐ REGISTERED **PERSONAL** ☑ METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION **SERVICE** MAIL 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) * Notice Not Sent ☐ COAL OWNER OR LESSEE Name: HG Energy II Appalachia, LLC Name: NA Address: 5260 Dupont Road Address: Parkersburg, WV 26101 COAL OPERATOR Name: Name: NA Address: Address: SURFACE OWNER(s) (Road and/or Other Disturbance) Name: Lisa M. Nutter □ SURFACE OWNER OF WATER WELL Address: 132 Praise Lane AND/OR WATER PURVEYOR(s) Jane Lew, WV 26378 Name: NA Name: Address: Address: _ ☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD Dominion Energy Transmission - Attn: Ronald Waldren ☐ SURFACE OWNER(s) (Impoundments or Pits) * Notice Name: Address: 925 White Oaks Blvd Name: HG Energy II Appalachia, LLC Not

Sen+

Bridgeport, WV 26330

*Please attach additional forms if necessary

WW-6A (8-13)

API NO. 47-OPERATOR WELL NO. Neel 1207 N-1F Well Pad Name: Neel 1207

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 Environmentant Oil and Gas Additional information related to nonzontal drilling may be obtained from the Secretary, as an experimental drilling may be obtained from the Secretary, as an experimental drilling may be obtained from the Secretary, as an experimental production headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-JAN-II and-gas/pages/default.aspx.

Well Location Restrictions

WV Department of Environmental Protection 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

API NO. 47-_

03/22/2019

OPERATOR WELL NO. Neel 1207 N-1H

Well Pad Name: Neel 1207

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

Water Well Testing:

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

Water Testing Laboratories:

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

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

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

Written Comment:

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

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

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.

WW-6A (8-13) API NO. 47- - 03/22/2019
OPERATOR WELL NO. Neel 1207 N-1H
Well Pad Name: Neel 1207

Time Limits and Methods for Filing Comments.

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

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

Comment Requirements

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

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

Permit Denial or Condition

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

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

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

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

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Office of Oil and Gas

JAN 1 5 2019

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WW-6A (8-13)

API NO. 47- - 03/22/2019
OPERATOR WELL NO. Neel 1207 N-1H
Well Pad Name: Neel 1207

Notice is hereby given by:

Well Operator: HG Energy II Appalachia, LLC

Telephone: 304-420-1119

Email: dwhite@hgenergyllc.com

_

Diane White

5260 Dupont Road

Parkersburg, WV 26101

Facsimile: 304

Address:

304-863-3172

Oil and Gas Privacy Notice:

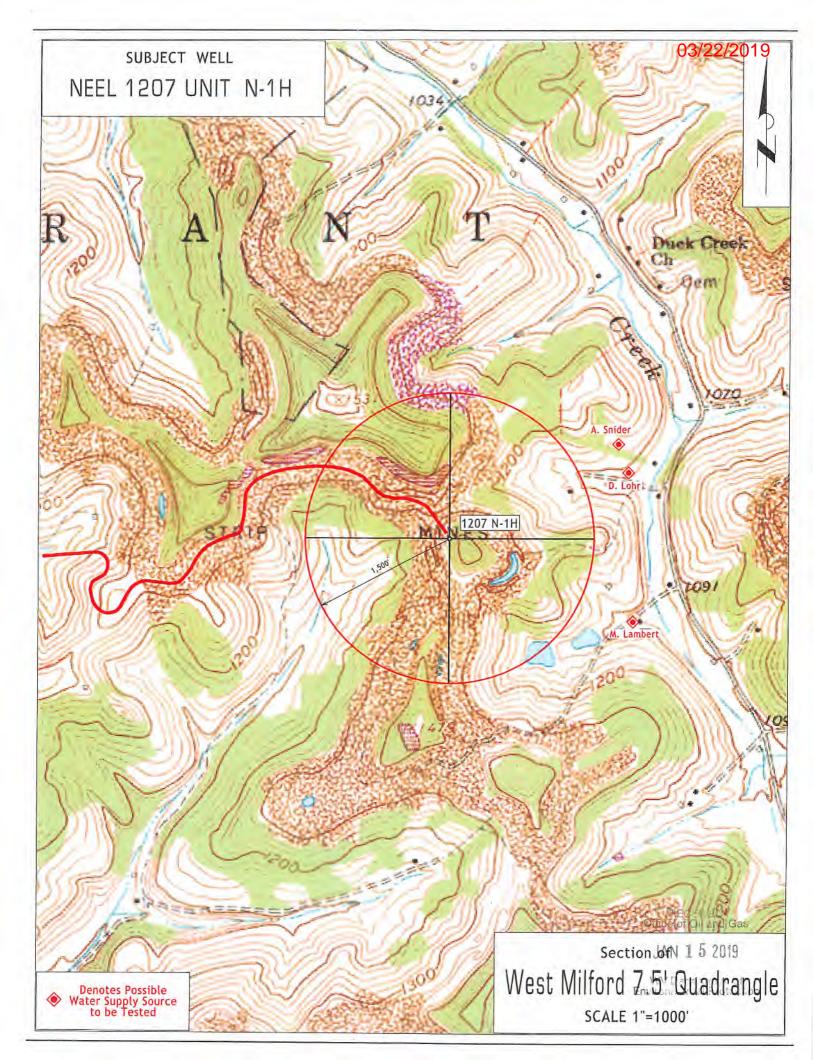
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory 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.

OFFICIAL SEAL
NOTANY PUBLIC. STATE OF WEST VIRGINIA
MARK SCHALL
H G Energy L L C
PO Box 5519, Vienna, WV 26108
My Commission Expires November 2, 2021

Subscribed and sworn before me this 8th day of January , 2019

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	2: 11/30/18	Date of Planned I	Entry: 12/10/18		`	, • ·
Delivery metl	od pursuant to We	st Virginia Code § 1	22-6A-10a			
PERSON SERVICE		istered [METHOD OF DEL RECEIPT OR SIGN		•	
on to the surfa but no more th beneath such t owner of mine and Sediment Secretary, whi enable the surfa	ce tract to conduct ar an forty-five days pr ract that has filed a d rals underlying such Control Manual and ch statement shall in face owner to obtain	ny plat surveys requi- rior to such entry to: leclaration pursuant to tract in the county to the statutes and rules clude contact inform	o filing a permit applicated pursuant to this are (1) The surface owner to section thirty-six, are ax records. The notice is related to oil and gas nation, including the acceptance.	ticle. Such notice s of such tract; (2) the ticle six, chapter to e shall include a state exploration and page	hall be provided at loo any owner or lesson wenty-two of this contement that copies or oduction may be ob-	least seven days ee of coal seams ode; and (3) any of the state Erosion otained from the
Notice is here	by provided to:		1 to a d			
SURFAC	E OWNER(s) *	. Was not no	COAI	LOWNER OR LE	SSEE	
Name: HG	nergy II Appalachia, LLC		Name:	NA		_
Address: 5260	Dupont Road		Address:			_
	rsburg, WV 26101					<u></u>
Name:						
Address:			■ MINE	ERAL OWNER(s)		
Name:			Address: _			_
Address:						_
			*please attacl	h additional forms if ne	cessary	
	est Virginia Code § 2 n the tract of land as West Virginia		is hereby given that th Approx. Latite Public Road A	ude & Longitude:	operator is planning 39.152278/-80.402724 SR 19	g entry to conduct
District:	Grant		Watershed:		Middle West Fork Creek	
	West Milford WV 7.5'		Generally use	d farm name:	Neel	
may be obtain Charleston, W obtained from	ed from the Secretary V 25304 (304-926-0 the Secretary by visi eby given by:	y, at the WV Departr 1450). Copies of suc ting <u>www.dep.wv.go</u>	ual and the statutes and ment of Environmenta th documents or additi ov/oil-and-gas/pages/d	l Protection headque on al information relefault.aspx. 5260 Dupont Road	arters, located at 60	01 57 th Street, SE,
•				Parkersburg, WV 26101		WV Department of
Email:	dwhite@hgenergyllc.com		Facsimile:	304-863-3172		Environmental Protection

Oil and Gas Privacy Notice:

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

WW-6A3 (1-12)

Page 1 Continued

Mineral Owners

Alfred Lee Cork 486 1/2 Lee Avenue Clarksburg, WV 26301-3638

Barbara K Marchio 28325 Elmdale St Saint Clair Shores, MI 48081-1485

Betty Jo & Kyle Fridley 7450 Good Hope Pike Lost Creek, WV 26385

Billie Jean Johnson 309 Ash Ave Clarksburg, WV 26301

Brenda Sue Cross 143 Lilac Lane Philippi, WV, 26416

Carl J. Edwards 25 E. Park Mobile Village Fairmont, WV 26554

Celia Linn Ferrell Baiker 5958 Chestnut CT Virginia Beach, VA 45242

Charles K Goodsmith c/o Shirley L. Miller 4267 Mount Clare Road Mount Clare, WV 26408-7100

Christina L McWhorter 2803 McDermott Ridge Rd Buchannon, WV 26201 Arthur Ward 49 Coleman Dr. Waterford, MI 48328

Bernard B McWhorter P O Box 5 Doylestown, OH 44230

Beverly A Randolph Dixon 1319 N ChaparralSt Corpus Christi, TX 78401

PO Box 85 Strasburg, OH 44680

Bruce L. Bennett & Kathy D. Bennett RR 3 Box 729 Lost Creek, WV 26385

Carleen W. Nutter & Michael Nutter RR 3 Box 808 Lost Creek, WV 26385

Charles K Saeler 140085 Gardner Ave. Ellerslie, MD 21529

Charles L Maxwell 72 Selby Road Morgantown, WV 26508

Cora A. Mearns 3915 Cloud Park Dr Apt A-a-1 Huber Heights, OH 45424 RECEIVED Office of Oil and Gas

JAN 1 5 2019

WW-6A3 (1-12)

Page 1 Continued

Mineral Owners

Cora May Hartzell 129 Huckleberry Branch Ct. Daytona Beach, FL, 32124

Craig M. Steele 801 Morgantown Avenue Fairmont, WV 26554

Cynthia K Barnes 2104 1/2 Prive Ave Clarksburg, WV 26301

Cynthis Kay Randolph Barnes 2104 1/2 Pride Ave Clarksburg, WV 26301

Dana Lee Bassell 173 Water Oak Dr Madison, AL 35758

Danny Joe & Deboah Jean Miller PO Box 426 West Milford, WV 26451

David Maxwell Gray 732 E. Park Ave. Charlotte, NC 28203

Debra Kay Kittle 908 Point Pleasant Rd Belington, WV, 26250

Delores June Orr 3915 Cloud Park Dr Apt A-a-1 Huber Heights, OH 45424 Cora May Sands Hartzell 129 Huckleberry Branch Ct Daytona, FL 32124

Cynthia Berry 1880 Loon Court Surfside Beach, SC, 29575

Cynthia McWhorter Berry 1880 Loon Ct Myrtle Beach, SC 29575

Dana Lee Bassel P.O. Box 2121 Kenai, AK 99611

Dani A. Smith 3260 Knobview Dr Nashville, TN 37214

David E. Bowyer 12088 Middle Island Rd Alma, WV, 26320

Deborah Bell Meyer 109 Palm Forest Pl Ponte Verda, FL 32082

Delores Jean Moats 90 Kincaidville Road Walkersville, WV 26447

Denise Wright
P.O. Box 371
West Milford, WV 26451

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Page 1 Continued

Mineral Owners

Donald H. Smith 516 Osborne Lane Sewickley, PA 15143

Donald Vance Vanscoy 93 Village Drive Fairmont, WV 26554

Dorothy O'Hanlon 235 W 102 Street Apt 7-0 New York City, NY 10025

Elizabeth Carder Fultineer 1925 Goff Ave Clarksburg, WV, 26301

First United Methodist Church of Lubbock Texas 1411 Broadway Street Lubbock, TX 79424

Geneva Bruffey 500 Henrie Lane Williamstown, WV 26187

George Ann Keener 4785 Arlington Dr Sykesville, MD 21784

Heirs of Mary Ann Randolph 451 West Fork St Clarksburg, WV 26301

Herbert D. Washburn 419 Armstrong Way Evens, GA 30809 Donald L. Johnson P.O. Box 209 Lakemore, OH 44250

Donna Frumento 2341 Mapleleaf Dr Vista, CA 92081

Elizabeth A Beveridge 243 Shady Lane Alma, WV 26320

Evelyn M. Ward and Richard L. Ward 1383 Duck Creek Lost Creek, WV 26385

Gary S. Winters 1112 Lake Floyd Circle Salem, WV 26426

Genevieve P Saeler 4798 US Highway 19N. Jane Lew, wv 26378

Gore Corporation PO Box 2101 Clarksburg, WV 26302

Helen M. Burton 8086 Powell Ave Stonewood, WV 26301

I.L. Morris P.O. Box 219 Coalton, WV 26257

WW-6A3 (1-12)

Page 1 Continued

Mineral Owners

James A. Edwards 1115 Virginia Fairmont, WV 26554

Jane R. Gray Koubek and Terry Dean Koubek 410 Monaco Dr Indialantic, FL 32903-4002

Jill Lambert 219 Ballantrae St Valparaiso, IN 46385

John Britton Edwards II 1809 Garden Drive Virginia Beach, Virginia 23454

John E Washburn 1408 Riverbend Road Lost Creek, WV 26385

John W McWhorter 7704 Enterprise Rd, Lot 3 Myrtle Beach, SC 29588

Joseph L Maxwell 3033 Gregory's Run Clarksburg, WV 26301

Joyce K Smith 358 Mill Hill Rd Williamsburg, PA 16693

Karen M Henderson 190 Saphire Lane Meadowbrook, WV 26404 Jane M Hardin 225 Watchung FRK Westfield, NJ 07090

Jean M. Chrzaszcz 39 Eden Church Road Morgantown, WV 26508

Jimmy Ward 288 Coleman Dr. Waterford, MI 48328

John E Washburn 186 KY Highway 90 West Albany, KY 42602

John M Wamsley 2768 La Paz Ave Hemet, CA 92545

Jonnene Kay Goglin 187 Blackwater Drive Harvest, AL 35749

Joseph M Sands 866 Valencia Rd S Daytona, FL 32119

> JP Morgan Chase Bank, Trustee Will E. Morris Trust PO Box 659 Wichita Falls, TX 76307-0659

Kimberlee K Holland 204 Ray Hudkins Rd Pennsboro, WV 26415 RECEIVED Office of Oil and Gas

JAN 1 5 2019

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Page 1 Continued

Mineral Owners

Kylene Claypoole 701 Industrial Drive West Sulphur Springs, Texas 75482

Leslie Smith Frank 516 Osborne Lane Sewickley, PA 15143

Linda V. Powers 255 Hilcrest Drive Southern Shores, NC 27949

Marcia E Thompson 2635 Hyndman Rd Hyndman, PA 15545

Margaret V Burkett 7431 Willow Rd, Unit 22 Frederick, MD 21702

Mari Lisa McWhorter Marlowe 108 Majestic Dr Cannonsburg, PA 15317

Mary Jane Hefner Pickens 795 W 2nd Ave Weston, WV 26452

Mary Jean Carroll 6218 Bermuda Ln Mount Morris, MI, 48458

Mary Kathryn Simon Haller Living Revocable Trust 9605 Tinsmith Lane Burke, VA, 22015 Larry J. Olinger 28561 Revere Warren, MI 48092

Lewis Wayne Davis P.O. Box 371 West Milford, WV 26451

Lonnie Kincaid 28 Bablin Ingo Road Ireland, WV 26376

Margaret Smith Brackett
516 Osborne Lane
Sewickley, PA 15143

Margaret V Saeler Burkett 2522 Carrington Way Frederick, MD 21702

Mari-Lisa Marlow

108 Majestic Drive
Canonsburg, PA, 15317

Mary Jean Balmer 619 Ohio Blvd Eustis, FL 32726

Mary Jean McWhorter Hall 619 Ohio Blvd Eustis, FL 32726

Mary V. Gray Trust 1983, c/o David M. Gray 732 East Park Ave Charlotte, NC 28203 RECEIVED Office of Oil and Gas

JAN 1 5 2019

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Page 1 Continued

Mineral Owners

Maurice M Sands 6272 NE 62nd St Silver Springs, FL 34488

Melissa Barker 216 Hidden Meadows Ln Jane Lew, WV 26378

Michael Ross and Waco Oil & Gas Company, Inc P.O. Box 219 Coalton, WV 26257

Mike Ross Inc PO Box 880 Glenville, WV 26351-0880

Mildred L. Brooks 3800 W Wilson St 243 Banning, CA, 92220

Norma Jean Simpson Fortney 7101 Wythe Hill Place Prospect, KY 40059

Page Harmer Thomas 714 Shamrock Lane Charleston, SC 29412

Pamela Voigt Bell 109 Palm Forest Pl Ponte Verda, FL 32082

Paula Denise Mosier 2102 Covert Rd Burton, MI, 48509 Maxine J. Gamble & David L.. Gamble 2016 Baldwin Drive Reynoldsburg, Ohio 43068

Michael L. Vanscoy 2409 Lylan Lane Leader, TX 78641

Mike Ross Inc P.O. Box 219 Coalton, WV 26258-0219

Mildred L Brooks 217 Bridgeside Ct Roseville, CA 95747

NAJ, LLC c/o Robert L. Johns 6 Timberline PL Charleston, WV 25311

Oren Justice 1715 Locust Ave Ashland, KY 41101

Pamela Voigt 109 Palm Forest Pl Ponte Verda, FL 32082

Patricia A. and Clifford E. Mealey 5240 Fawn Drive Akron, OH 44319

Peggy McWhorter 304 Nathans St, Apt H Elkins, WV 26241 RECEIVED Office of Oil and Gas

JAN 1 5 2019

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Page 1 Continued

Mineral Owners

Peggy Ward 49 Coleman Dr. Waterford, MI 48328

Piala Living Trust c/o Vanessa Jo Piala 4811 Cumberland Ave Chevy Chase, MD 20815

Raymond Brooks Vanscoy Testamentary Trust PO Box 1152 Fairmont, WV 26555

Rebecca V. Melkus 300 High Street Mannington, WV 26582

Robert Dean Davis P.O. Box 371 West Milford, WV 26451

Roger Justice 877 Plymouth Rd NE Atlanta, GA 30306

Ronald L. Johnson P.O. Box 209 Lakemore, OH 44250

Rubin B Vanscoy 8053 Kidd Ave Clarksburg, WV 26301-7706

Sandra Simon Faulkner 610 Olive St Pittsburgh, PA 15237 Phillip Simon 373 Parker Dr Pittsburgh, PA 15237

Randolph Starr 322 W. 6th st. Tarentum, PA 15084

Rebecca D Arthur 1716 Wonderland Rd Fayetteville, WV 25840

Rhonda Koutsobaris 3478 Duck Creek Rd Lost Creek, WV 26385

Robert Nimorwicz 406 Hearth Terrace Argyle, TX 76226

Ronald J. Vanscoy 216 Waitman Street Morgantown, WV 26501

Ronald Lee Johnson, Sr. 32 Tetrick Street Clarksburg, WV 26301

Ryan C. Radtka 205 Mystic Drive Morgantown, WV 26508

Sandra Ward Miller & Willard Miller 1383 Duck Creek Road Lost Creek, WV 26385 RECEIVED Office of Oil and Gas

JAN 1 5 2019

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Page 1 Continued

Mineral Owners

Sara Ella Burden 1800 Chapel Road Havre De Grace, MD 21078

Shelley Simon 2222 N Robert Bruce Dr Richmond, VA 27006

Shirley L Miller 4267 Mount Clare Road Mount Clare, WV 26408-7100

Steven Keith Reed P.O, Box 544 Slater, IA, 50244

Steven P Washburn 927 Hillview Dr Cary, NC 27511

Susan Brown Yunker 3668 Toland Ave Los Alamitos, CA 90720-2256

Suzanne D. Simmons 624 Court Ave Weston, WV, 26452

Thomas Cannon 11539 Wellman Drive Riverview, FL 33578

Timothy Wayne Reed 208 West Harrison Rd Zearing, IA, 50278 Sean T. Ryan PO Box 31132 Tucson, AZ 85751

Sherry Simon Kauff 430 N Hiddenbrooke Dr Advance, NC 27006

Stephen Simon 4530 Heartland Way Fredericksburg, VA 22408

Steven L Maxwell 102 Scenery Drive Morgantown, WV 26508

Susan B. Woods 4807 Sunrise Blvd Fort Pierce, FL 34982

Susan P. Jamison 103 Margate Drive, apt A Butler, PA 16001

Terence L. Washburn 1408 Riverbend Road Lost Creek, WV 26385

Timothy Ward 49 Coleman Dr. Waterford, MI 48328

Velma I. Steif 174 Wise Acres Rd Ellijay, GA 30536 Office of Oil and Gas

JAN 1 5 2019

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Page 1 Continued

Mineral Owners

Waco Oil and Gas P.O. Box 219 Coalton, WV 26257

Walter B. Smith 413 Poplar Ave Port Saint Lucie, FL 34952

Wells Fargo Bank N.A. Trustee
James A. Harmer Testamentary Trust
PO Box 5383
Denver, CO 80217-5383

William B. Washburn RR2 Box 191 Jane Lew, WV 26378

William L. Thompson 240 Hite Hollow Rd Hyndman, PA, 15545

Zane Anthony Justice 2706 Algonquin Ave Ashland, KY 41102

HG Energy II Appalachia, LLC*
5260 Dupont Road
Parkersburg, WV 26101
*Will Not Be Noticed Via Certified Mail

Waco Oil and Gas Inc. and Michael Ross P.O. Box 880 Boynton Beach, FL, 33435

Waymon Kincaid 18063 US HWY 19 S Walkersville, WV 26447

WV State Conservation Commission 1900 Kanawha Blvd. E. Charleston, WV 25305

William B. Washburn 10243 Good Hope Pike Jane Lew, WV 26378

William Michael Davis P.O. Box 371 West Milford, WV 26451

Zhen Wang 105 Pickens Rd Apt 3A Nitro, WV, 25143 RECEIVED Office of Oil and Gas

JAN 1 5 2019



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

November 27, 2018

Re: Lease Boundary Surveys - 1207 Drilling Unit

To: Landowners Located within the 1207 Drilling Unit:

HG Energy II Appalachia, LLC (HG) is planning to drill a Marcellus well in Harrison and Lewis Counties, WV. Your property has been identified as being located within the proposed drilling unit area.

HG has contracted with Allegheny Surveys, Inc. (ASI) of Bridgeport, WV to accurately locate and map HG's lease boundaries in the drilling unit. This letter is provided as authorization for ASI to act as agent on behalf of HG to survey and map HG's lease boundaries in preparation for the prospective well work permit.

As agent for HG, ASI is expected conduct its operations in a safe, courteous and respectful manner. If you have any problems with the survey crew on your property, or if you have any questions regarding HG's operations, you may call me at 304-420-1120 to discuss.

Thank you for your cooperation with us during this project.

Respectfully,

Office of Oil and Gas

JAN 1 5 2019

RECEIVED

WV Department of Environmental Protection

Timothy P. Roush, PS

Operations Land Manager HG Energy II Appalachia, LLC 5260 Dupont Road Parkersburg, WV 26101 WW-6A4 (1/12)

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.

Date of Notic	ee: 01/08/2019 Date	Permit Application Filed: 01/10/2019	
Delivery met	hod pursuant to West Virginia Cod	e § 22-6A-16(b)	
☐ HAND	■ CERTIFIED MAIL		
DELIVE	RETURN RECEIPT	REQUESTED	
receipt request drilling a hore of this subsection mand if availab	sted or hand delivery, give the surface izontal well: <i>Provided</i> , That notice gition as of the date the notice was provay be waived in writing by the surface le, facsimile number and electronic management.	owner notice of its intent to enter upon the ven pursuant to subsection (a), section to ided to the surface owner: <i>Provided, how</i>	The state of the s
Name: HG	Energy II Appalachia, LLC	Name:	
Address: 5260	Dupont Road	Address:	
Parl	kersburg, WV 26101		
Notice is he Pursuant to Whe surface ov	reby given: Vest Virginia Code § 22-6A-16(b), no wner's land for the purpose of drilling	a horizontal well on the tract of land as fo	well operator has an intent to enter upon ollows:
Notice is he Pursuant to W he surface ov State: County:	reby given: Vest Virginia Code § 22-6A-16(b), no wner's land for the purpose of drilling West Virginia Harrison	a horizontal well on the tract of land as fo ——— UTM NAD 83 Easting: Northing:	bllows: 551608.3 4333845.1
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Notice is he Pursuant to W the surface ov State: County: District: Quadrangle: Watershed: This Notice Pursuant to W facsimile nur related to hor located at 601 Notice is he Well Operato Address: Telephone:	reby given: Vest Virginia Code § 22-6A-16(b), no vner's land for the purpose of drilling West Virginia Harrison Union West Milford Middle West Fork Creek Shall Include: West Virginia Code § 22-6A-16(b), inber and electronic mail address of trizontal drilling may be obtained from 57th Street, SE, Charleston, WV 2530 reby given by: r: HG Energy II Appalachia, LLC 5260 Dupont Road	a horizontal well on the tract of land as for Easting: Northing: Public Road Access: Generally used farm name: this notice shall include the name, address at the Secretary, at the WV Department of the Secretary, at the WV Department of the Secretary at the WV Department of Authorized Representative: Address: Telephone:	ollows: 551608.3 4333845.1 SR 19/Hackers Creek Road Hubert E & Sandra K Neel ress, telephone number, and if available, and representative. Additional information of Environmental Protection headquarters, ap.wv.gov/oil-and-gas/pages/default.aspx. Diane White 5260 Dupont Road
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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.

WW-6A5 (1/12) Operator Well No. _03/22/2019

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

Notice Time Date of Notic	Requirement: notice shall be prove: 01/08/2019 Date Per	rmit Application Filed: 01/10/2019	
Delivery met	hod pursuant to West Virginia C	ode § 22-6A-16(c)	
■ CERTI	FIED MAIL	☐ HAND	
	RN RECEIPT REQUESTED	DELIVERY	
return receipt the planned of required to be drilling of a land damages to the (d) The notice of notice. Notice is here (at the addres	requested or hand delivery, give the operation. The notice required by a provided by subsection (b), section thorizontal well; and (3) A propose are surface affected by oil and gas on the propose of the surface affected by this section shall be a surface affected by this section shall be a surface affected by this section shall be a surface affected by this section shall be a surface affected by this section shall be a surface affected by this section shall be a surface affected by this section shall be a surface affected by the	ne surface owner whose land will be this subsection shall include: (1) A note of this article to a surface owner at surface use and compensation agreement to the extent the damages a given to the surface owner at the additional to the surface owner at	it application, an operator shall, by certified mail used for the drilling of a horizontal well notice of A copy of this code section; (2) The information er whose land will be used in conjunction with the greement containing an offer of compensation for the compensable under article six-b of this chapter, dress listed in the records of the sheriff at the time
Address: 5260	Dupont Road	Address:	
/ tuul cos.			
	ersburg, WV 26101		
Notice is her Pursuant to W operation on State: County: District: Quadrangle:	eby given: Vest Virginia Code § 22-6A-16(c), rethe surface owner's land for the pu West Virginia Harrison Union West Milford	rpose of drilling a horizontal well or	ting: 4333845.1 rthing: 551608.3 SR19/Hackers Creek Road
Notice is her Pursuant to W operation on State: County: District: Quadrangle: Watershed: This Notice S Pursuant to W to be provide horizontal we surface affect information r	eby given: Vest Virginia Code § 22-6A-16(c), 1 the surface owner's land for the pu West Virginia Harrison Union West Milford Middle West Fork Creek Shall Include: Vest Virginia Code § 22-6A-16(c), ed by W. Va. Code § 22-6A-10(b) ell; and (3) A proposed surface use ted by oil and gas operations to the leated to horizontal drilling may be located at 601 57th Street, SE,	this notice shall include: (1)A copy to a surface owner whose land wand compensation agreement contains extent the damages are compensation obtained from the Secretary, at the surface of the surface owner whose land wand compensation agreement contains the obtained from the Secretary, at the surface of the surface owner whose land wand compensation agreement contains of the surface obtained from the Secretary, at the surface of the surfa	ting: 4333845.1 thing: 551608.3 SR19/Hackers Creek Road
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Notice is her Pursuant to W operation on State: County: District: Quadrangle: Watershed: This Notice & Pursuant to W to be provide horizontal we surface affect information r headquarters, gas/pages/def	eby given: Vest Virginia Code § 22-6A-16(c), rest Virginia Code § 22-6A-16(c), rest Virginia Code § 22-6A-16(c), rest Virginia Harrison Union West Milford Middle West Fork Creek Shall Include: Vest Virginia Code § 22-6A-16(c), rest Virginia Code § 22-6A-10(b) rest Virginia Code § 22-6A-10(b) rest Virginia Code § 22-6A-10(b) rest Virginia Code § 22-6A-10(b) rest Virginia Code § 22-6A-10(b) rest Virginia Code § 22-6A-10(b) rest Virginia Code § 22-6A-10(b) rest Virginia Code § 22-6A-10(b) rest Virginia Code § 22-6A-10(b) rest Virginia Code § 22-6A-16(c), rest Virginia Code §	this notice shall include: (1)A copy to a surface owner whose land wand compensation agreement contains extent the damages are compensation (25304) (304-926) Address: 5260 Dup	the tract of land as follows: ting: 433845.1 thing: 551608.3 SR19/Hackers Creek Road Hubert E & Sandra K Neel of this code section; (2) The information required fill be used in conjunction with the drilling of a fining an offer of compensation for damages to the ble under article six-b of this chapter. Additional the WV Department of Environmental Protection (5-0450) or by visiting www.dep.wv.gov/oil-and-ont Road
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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 of our voltage 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.

JAN 1 5 2019

Environmental Frotection



WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

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

January 8, 2019

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

Jill M. Newman Deputy Commissioner

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

Subject: DOH Permit for the Neel 1207 Well Pad, Harrison County
N-1H Well Site

Dear Mr. Martin,

This well site will be accessed from Permit #04-2018-1374 issued to HG Energy II Appalachia for access to the State Road for a well site located off of Harrison County 19/20 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 October 1, 2018.

Very Truly Yours,

Gary K. Clayton, P.E.

Regional Maintenance Engineer Central Office O&G Coordinator

Dang K. Clayton

Cc: 1

Diane C. White

HG Energy II, LLC CH, OM, D-4

File

Office of Oil and Gas

JAN 1 5 2019

LAV Decement of Environmental Protection

List of Frac Additives by Chemical Name and CAS

Neel 1207 Well Pad (N-1H to N-6H, S-7H to S-12H)

Mixture Mixture	68551-12-2 7647-14-5 12125-02-9 64742-47-8 68412-54-4 68607-28-3 107-21-1 111-76-2 67-56-1 107-19-7 14808-60-7 1344-28-1 1309-37-1 13463-67-7
Mixture	7647-14-5 12125-02-9 64742-47-8 68412-54-4 68607-28-3 107-21-1 111-76-2 67-56-1 107-19-7 14808-60-7 1344-28-1 1309-37-1
	12125-02-9 64742-47-8 68412-54-4 68607-28-3 107-21-1 111-76-2 67-56-1 107-19-7 14808-60-7 1344-28-1 1309-37-1
	64742-47-8 68412-54-4 68607-28-3 107-21-1 111-76-2 67-56-1 107-19-7 14808-60-7 1344-28-1 1309-37-1
	68412-54-4 68607-28-3 107-21-1 111-76-2 67-56-1 107-19-7 14808-60-7 1344-28-1 1309-37-1
	68607-28-3 107-21-1 111-76-2 67-56-1 107-19-7 14808-60-7 1344-28-1 1309-37-1
Mixture	68607-28-3 107-21-1 111-76-2 67-56-1 107-19-7 14808-60-7 1344-28-1 1309-37-1
Mixture	111-76-2 67-56-1 107-19-7 14808-60-7 1344-28-1 1309-37-1
Mixture	111-76-2 67-56-1 107-19-7 14808-60-7 1344-28-1 1309-37-1
Mixture	67-56-1 107-19-7 14808-60-7 1344-28-1 1309-37-1
Mixture	107-19-7 14808-60-7 1344-28-1 1309-37-1
Mixture	1344-28-1 1309-37-1
Mixture	1344-28-1 1309-37-1
	1309-37-1
	V Committee of the Comm
	13463-67-7
7647-01-0	
64742-96-7	
Mixture	25322-68-3
viixture	10222-01-2
107-21-1	
Mixture	57-50-1
	107-21-1
5329-14-6	
Mixture	67-63-0
	68439-45-2
	2687-96-9
	Mixture

Office of Oil and Gas

JAN 1 5 2019

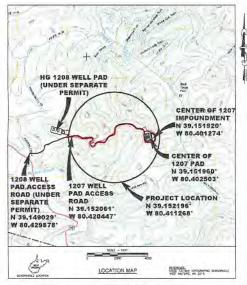
HG 1207 WELL PAD & IMPOUNDMENT



GRANT 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.
- 2. 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.
- 3. 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.
- 4. Land Clearing and Grading Implement clearing and grading only after all downslope E&S BMPs have been constructed and stabilized.
- 5. 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.
- 6. 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
- Upon completion of pad grading, compact the pad to grade and begin placement of pad soil cement.
- Final Stabilization, Topsoiling, Trees and Shrubs After construction is completed, install stabilization BMPs including: permanent seeding, mulching and riprap, and complete implementation of stormwater BMPs in this last construction phase. Stabilize all open areas, including borrow and spoil areas, and remove all temporary BMPs and stabilize any disturbances associated with the removal of the BMP



PREPARED FOR HG ENERGY II APPALACHIA, LLC

5260 DUPONT ROAD PARKERSBURG, WEST VIRGINIA 26101 (304) 420-1100

PREPARED BY

PENN ENVIRONMENTAL & REMEDIATION, INC.

111 BYAN COURT PITTSBURGH, PA 15205 (412) 722-1222

	Cut	74	STOCKNIE
1207 Well Pap & Impoundment	44.687	49,335	-4,661
Appeals Reset	11.879	15.763	-7.314
Total	55.566	65.121	-0.350
Soil Adjustment for A	froorf stepergp		
Pod			6.709
Total Site Balance.			1,846.F/
Smooth Topsel (L.)	of Disturbance		22.793
Fat Swell Factor	(2	2014	4,550
F.a. Topsoil Stoops	e Volume (Loose)	DM.	77.352
		sweet (C.Y.)	27.352

3. Material balance and aggregate quantities based on estimate

et may not be representative of actual quantities. Estimates do not reflect confession pay volumes.

Let mored Claimel Quartities	-xi/warad	Aggers Hoad	TOTAL
10" Sol Cement (Placed Sh)	35.161	17.712	53.673
a" Depth of 3/4" On sher flux (Tone)	3817	-	3.917
Top Cart Chy, & Stall (Pound SY)	-	17,712	17.7%
			19"
Ean maker Total Compost Filter Secul	engin (Lin)		11,230
East-stud Appears Road Fifter Sock Lo	ngth (LF)		0,192
Estimated Well Fac and Impoundmen	Fitter Sec+ Leng	th (LF)	2,008
Estimated Total Limit of Disturbance	e (Acres)		28.258
Essimated Access Road Limit of Ci-	surbance Maxe	0	7b 541
Estimated Well Pad and Impounding	n: Limit of Disso.	bance (Acre	6) 12,712

Well Had and Stepping Area Peer Pre-Constructors Electron (IPS) 1254.0

SHT. NO.	SHEET TITLE
	TITLE ISHEET
2A-2G	SITE DEVELOPMENT PLANS
3	PAD & IMPOUNDMENT SECTIONS
4A-4D	ACCESS ROAD SECTIONS
5A-5F	CONSTRUCTION NOTES & DETAILS
6A-6F	RESTORATION PLAN
7	PROPERTY MAP

WELL #	LAT.	LONG.
N=1H	N 39.152278	W 80.402724
N-2H	N 39.152284	W 80.402672
N=3H	N 39.152290	W 80.402620
N-4H	N 39.152297	W 80.402567
N-5H	N 39.152303	W 80.402515
N-6H	N 39.152309	W 80,402463
S-7H	N 39.151411	W 80.402540
S-8H	N 39.151417	W 80.402487
5-9H	N 39.151423	W 80.402435
S=10H	N 39.151430	W 80.402383
S-11H	N 39.151436	W 80.402331
S-12H	N 39.151442	W 80.402278

	LATITUDE	LONGITUDE
1207 WELL PAD ACCESS ROAD ENTRANCE	N 39.152061	W 80.420447
1208 WELL PAD ACCESS ROAD ENTRANCE	N 39.148029	W 80.429878

SECORD DWNER	RECORD LOT #	RECORD AREA OF LOT	MREA WITHIN LCD
NEEL HUBERT E & SANCRA K	17-12-0445-0005-0000	89.07 AC.	15.027 AC
NUTTER USA M	17-12-0445-0003-0000	64.00 AC.	2.654 AC.
NUMBER LISA N	17-12-0445-0012-0000	54.50 AC	2.858 AC.
NUTTER LISA N	17-12-0445-0011-0000	75.50 AC	D.760 AC.
SALLES OF	17-12-0445-0010-0000	66.87 AC	3.475 AC.
NUTTER LISA W	17-12-0445-0002-0000	84.57 AC	3.459 AC.
SPOOMATER WILLIAM IN IN & LINDA L	17-12-0425-0031-0000	247,84 AC.	0.025 AC
7074) 1 107	OF DISTURBANION		20 268 10

1. SERVICE UTILITY LINES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING MAINTAINING AND REPLACING AS NICCESSARY TO ENSURE CONTINUAL SERVICE.

Dial 811 or

PARKERSBURG, WEST VIRGINIA

TITLE SHEET HG 1207 WELL PAD & IMPOUNDMENT GRANT DISTRICT

HARRISON COUNTY, WEST VIRGINIA

PREPARED FOR

HG ENERGY II APPALACHIA, LLC

WEST VIRGINIA

YOU DIG!

PA007831-001 SHEET 1

Penn E&R

