



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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Tuesday, December 3, 2024
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit Modification Approval for VAN WIE 1221 N-3H
47-041-05762-00-00

Lateral Extension

HG ENERGY II APPALACHIA, LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

If there are any questions, please feel free to contact me at (304) 926- 0450.

A handwritten signature in blue ink, appearing to read 'James A. Martin', is written over a faint circular stamp.

James A. Martin
Chief

Operator's Well Number: VAN WIE 1221 N-3H
Farm Name: HG ENERGY II APPALACHIA, LLC ET AL
U.S. WELL NUMBER: 47-041-05762-00-00
Horizontal 6A New Drill
Date Modification Issued: 12/03/2024

Promoting a healthy environment.

12/06/2024

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

1) Well Operator: HG Energy II Appalachia, LLC

<u>494519932</u>	<u>Lewis</u>	<u>Freeman</u>	<u>Vadis 7.5'</u>
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Operator ID County District Quadrangle

2) Operator's Well Number: Van Wie 1221 N-3H Well Pad Name: Van Wie 1221

3) Farm Name/Surface Owner: HG Energy II Appalachia, LLC Public Road Access: CR 11/3 aka Straight Run Road

4) Elevation, current ground: 1256' Elevation, proposed post-construction: 1251.7'

5) Well Type (a) Gas Oil Underground Storage
Other

(b) If Gas Shallow Deep
Horizontal

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 7002' / 7049' and 47' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 7,035'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 30,081'

11) Proposed Horizontal Leg Length: 22,581'

12) Approximate Fresh Water Strata Depths: 150', 181', 826'

13) Method to Determine Fresh Water Depths: Nearest offset well data, (47-017-02906, 2480, 4233,)

14) Approximate Saltwater Depths: NA

15) Approximate Coal Seam Depths: 220' - 225', 428'-438', 495'-501' (Surface casing is being extended to cover the coal in the DTI Field)

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

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

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

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18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	30"	New	LS	157.5	120'	120'	CTS
Fresh Water/Coal	20"	NEW	J-55	94	1225'	1225'	40% Excess, CTS
Intermediate 1	13 3/8"	NEW	J-55 BTC	68	2760'	2760'	40% Excess, CTS
Intermediate 2	9 5/8"	NEW	N/L-80 BTC	40	5750'	5750'	40% Excess Tail, CTS
Production	5 1/2"	NEW	P-110 HP	23	30081'	30081'	20% Excess Tail, CTS
Tubing							
Liners							

Kenneth Greynolds
Digitally signed by Kenneth Greynolds
DN: CN = Kenneth Greynolds email = Kenneth.L.Greynolds@wv.gov C = AD O = WVDEP OU = Oil and Gas
Date: 2024.10.23 09:54:43 -0400

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	30"	30"	.500				Drilled In
Fresh Water/Coal	20"	26"	.438	2110	1200	Type 1, Class A	40 % excess yield = 1.20, CTS
Intermediate 1	13 3/8"	17 1/2"	.480	3450		Type 1/Class A	Lead 40% excess, Tail 0% excess
Intermediate 2	9 5/8"	12 1/4"	.395	5750		Type 1/Class A	Lead 40% excess, Tail 0% Excess
Production	5 1/2"	8 1/2"	.415	16240	12500	Type 1/Class A	20% excess yield = 1.19, tail yield 1.94
Tubing							
Liners							

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

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

Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 7035'. Drill horizontal leg to estimated 22,581' lateral length, 30,081' 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 ACP 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): 24.95 acres

22) Area to be disturbed for well pad only, less access road (acres): 9.53 acres

23) Describe centralizer placement for each casing string:

No centralizers will be used with conductor casing.
Freshwater/Coal - centralized every 3 joints to surface.
Intermediate 1 - Bow Spring on every joint, will also be running ACP for isolating storage zone
Intermediate 2 - Bow Spring on first 2 joints then every third joint to 100' from surface.
Production - Vertical - Run 1 spiral centralizer every 5 joints from the top of the curve to surface, Curve - Run 1 spiral centralizer every 3 joints from the 1st 5.5' long joint to the top of the curve.

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

Conductor -NA, Casing to be drilled in w/ Dual Rotary Rig.
Fresh Water/Coal - ~15.6 ppg PNE-1 + 3% bwoc CaCl40% ExcessYield=1.20 / CTS*
Intermediate 1 - **** Storage String *** CTS ****15.4 ppg Lead - Yield 1.24 - D896 Surface Set 100 lb / sack (Mix of Class A and Gypsum to meet Dominion Requirements)B348 - 0.5% BWOB Fluid Loss / D013 - 0.75% BWOB Retarder / D47 - 0.02 gal / sack VEWOB Anil Foam / D202 - 0.15% BWOB Dispersant / D095 1.5 lb per BBL CemNET* - 60% Excess15.9 ppg Tail - Yield 1.17 - D896 Surface Set 100 lb / sack (Mix of Class A and Gypsum to meet Dominion Requirements)B160A - 0.15% BWOB Dispersant / B547 - 0.36% BWOB GasBLOC* / D013 - 0.3% BWOB Retarder / D047 - 0.02 gal / sack Anil Foam / D801 - 0.03 gal / sack Retarder - 0% Excess*
Intermediate 2 - *Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS*
Production - *Lead: 14.5 ppg POZ-PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA17020% ExcessLead Yield=1.19Tail Yield=1.94CTS*

25) Proposed borehole conditioning procedures:

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

*Note: Attach additional sheets as needed.

4704105702

*** Storage String *** CTS ***
 15.4 ppg Lead - Yield 1.24 - D896 Surface Set 100 lb / sack (Mix of Class A and Gypsum to meet Dominion Requirements)
 B348 - 0.5% BWOB Fluid Loss / D013 - 0.75% BWOB Retarder / D47 - 0.02 gal / sack VBWOB Anti Foam / D202 - 0.15% BWOB
 Dispersant / D095 1.5 lb per BBL CemNET* - 60% Excess
 15.9 ppg Tail - Yield 1.17 - D896 Surface Set 100 lb / sack (Mix of Class A and Gypsum to meet Dominion Requirements)
 B160A - 0.15% BWOB Dispersant / B547 - 0.35% BWOB GasBLOK* / D013 - 0.3% BWOB Retarder / D047 - 0.02 gal / sack Anti Foam /
 D801 - 0.03 gal / sack Retarder - 0% Excess

**1221 N-3H
 Marcellus Shale Horizontal
 Lewis County, WV**

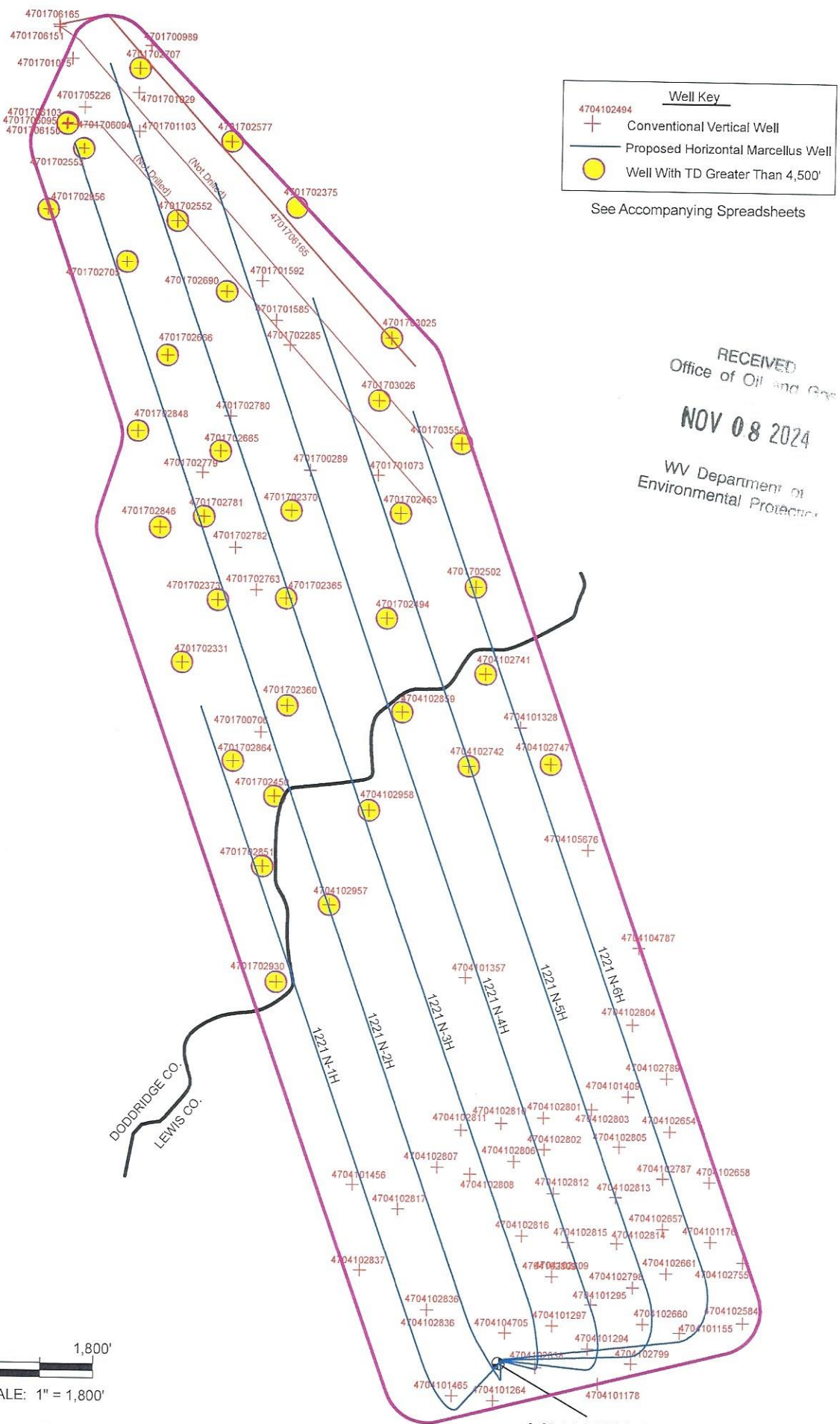


Ground Elevation		1251.77'		1221 N-3H SHL				14197346.51N 1734496.23E		
Azm		340.474°		1221 N-3H LP				14197937.95N 1735048.73E		
WELLBORE DIAGRAM				1221 N-3H BHL				14219223.18N 1727542.09E		
HOLE	CASING	GEOLOGY	TOP	BASE	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS	
30"	30" 157.5# LS	Conductor	0	120	AIR	N/A, Casing to be drilled in w/ Dual Rotary Rig	N/A	Ensure the hole is clean at TD.	Conductor casing = 0.5" wall thickness	
		Coal	740	746	AIR	15.6 ppg PNE-1 + 3% bwoc CaCl 40% Excess Yield=1.20 / CTS	Centralized every 3 joints to surface	Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.	Surface casing = 0.438" wall thickness Burst=2110 psi	
26"	20" 94# J-55	Fresh Water Protection	0	1225						
		Little Lime	2167	2187						
17.5"	13-3/8" 68# J-55 BTC	Big Lime	2216	2265	AIR / KCL Salt Polymer	See above (LEFT) for Storage String Cement Blend to Meet DTI Requirements for Gas Storage Field Isolation	Bow Spring on every joint <i>*will also be running ACP for isolating storage zone*</i>	Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.480" wall thickness Burst=3450 psi	
		Injun / Gantz (Storage)	2265 / 2597	2361 / 2647						
		Intermediate 1	0	2760						
12.25"	9-5/8" 40# N / L-80 BTC	Thirty Foot	2789	2799						
		Gordon	2837	2915						
		5th Sand	3066	3102						
		Bayard	3161	3174	AIR / KCL Salt Polymer	Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess. CTS	Bow Spring on first 2 joints then every third joint to 100' form surface	Once casing is at setting depth, Circulate and condition mud at TD. Circulate a minimum of one hole volume prior to pumping cement.	Intermediate casing = 0.395" wall thickness Burst=5750 psi	
		Speechley	3634	3666						
		Benson	5038	5072						
8.75"		Alexander	5324	5444						
		Intermediate 2	0	TVD: 5675' MD: 5750' Inc: 10 deg.						
8.5" Curve	5-1/2" 23# P-110 HP TXP / W461	Rhinestreet	6303	6591	AIR / 9.0ppg SOBMB	Lead: 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170 Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess Lead Yield=1.19 Tail Yield=1.94 CTS	Run 1 spiral centralizer every 5 joints from the top of the curve to surface.	Once on bottom/TD with casing, circulate at max allowable pump rate for at least 2x bottoms up, or until returns and pump pressures indicate the hole is clean. Circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.415" wall thickness Burst=16240 psi Note:Actual centralizer schedules may be changed due to hole conditions	
		Cashaqua	6591	6736						
		Middlesex	6736	6815	11.5ppg-12.5ppg SOBMB					
		West River	6815	6884						
		Burkett	6884	6925						
		Tully Limestone	6925	6952						
		Hamilton	6952	7002						
		Marcellus	7002	7049						
		TMD / TVD (Production)	30081	7035	11.5ppg-12.5ppg SOBMB					
		Onondaga	7049							
8.5" Lateral										

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LP @ 7035' TVD / 7500' MD 8.5" Hole - Cemented Long String 5-1/2" 23# P-110 HP TXP / W461 +/-22581' ft Lateral TD @ +/-7035' TVD +/-30081' MD

X=centralizers



Well Key
 4704102494
 + Conventional Vertical Well
 — Proposed Horizontal Marcellus Well
 ● Well With TD Greater Than 4,500'

See Accompanying Spreadsheets

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0 1,800'
 SCALE: 1" = 1,800'

DATA SOURCES
 WVGES Data Set - 2023; WVDEP Website

Area of Review for:

VAN WIE 1221 NORTH UNIT

Proposed 1221 N-1H Proposed 1221 N-2H Proposed 1221 N-3H
 Proposed 1221 N-4H Proposed 1221 N-5H Proposed 1221 N-6H

Cove District, Doddridge County, W.Va.
 Freeman's Creek District, Lewis County, W.Va.

12/06/2024
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 5260 DuPont Road, Parkersburg, WV 26101

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EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:

VAN WIE 1221 NORTH UNIT AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H, N-5H, & N-6H

WELL ID	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4701700289	Doddridge	E B Severn	Carr, A. T., and Collins, John, Drilling Co.	Big Injun (Price&eq)	Dry w/ Gas Show	2083	PLUGGED	39.136276	-80.680367
2	4701700706	Doddridge	Alphonsus Brown	UNKOWN	Big Injun (undiff)	Gas w/ Oil Show	2086	ABANDONED	39.124089	-80.683170
3	4701701073	Doddridge	Henry & Ella Droppleman	Ross & Wharton Gas Company, Inc.	Up Devonian	Gas	2895	ABANDONED	39.136098	-80.676307
4	4701701585	Doddridge	Stella Severn	Berry Energy, Inc.	Big Injun (Grnbr)	Oil and Gas	2268	ABANDONED	39.143240	-80.682617
5	4701701592	Doddridge	Stella Severn	Berry Energy, Inc.	Big Injun (Grnbr)	Oil and Gas	2286	ABANDONED	39.145011	-80.683519
6	4701702285	Doddridge	Stella Severin	Rockwell Resources, LLC	Big Injun (Grnbr)	Dry	2197	PLUGGED	39.141922	-80.681834
7	4701702331	Doddridge	G G Schmidt et al	Beta Helix Energy, LLC	Alexander	Gas	5488	ACTIVE	39.127302	-80.687917
8	4701702360	Doddridge	Fonce Brown	Beta Helix Energy, LLC	Alexander	Gas	5183	ACTIVE	39.125345	-80.681591
9	4701702365	Doddridge	Fonce Brown	Beta Helix Energy, LLC	Alexander	Gas	5198	ACTIVE	39.130315	-80.681747
10	4701702370	Doddridge	H & E Droppleman	Beta Helix Energy, LLC	Alexander	Gas	5226	ACTIVE	39.134395	-80.681471
11	4701702373	Doddridge	Fonce Brown	Beta Helix Energy, LLC	Elk	Gas	5460	ACTIVE	39.130216	-80.685815
12	4701702450	Doddridge	Fonce Brown	Beta Helix Energy, LLC	Brallier	Gas	5426	ACTIVE	39.121106	-80.682308
13	4701702453	Doddridge	H & E Droppleman	Beta Helix Energy, LLC	Alexander	Gas	5496	ACTIVE	39.134331	-80.674927
14	4701702494	Doddridge	Joseph Brown	Beta Helix Energy, LLC	Elk	Gas	5333	ACTIVE	39.129444	-80.675711
15	4701702502	Doddridge	Joseph Brown	Beta Helix Energy, LLC	Greenland Gap Fm	Gas	5040	ACTIVE	39.130928	-80.670402
16	4701702553	Doddridge	G Determan	Greylock Conventional, LLC	Greenland Gap Fm	Gas	5728	ACTIVE	39.151110	-80.694165
17	4701702665	Doddridge	M Toia	Geo Energy, LLC	Alexander	Gas	5461	ACTIVE	39.137126	-80.685750
18	4701702666	Doddridge	J Glenn	Geo Energy, LLC	Alexander	Gas	5634	ACTIVE	39.141560	-80.689005
19	4701702690	Doddridge	M Toia	Geo Energy, LLC	Alexander	Gas	5632	ACTIVE	39.145292	-80.686788
20	4701702705	Doddridge	Kenneth Capp	Geo Energy, LLC	Alexander	Gas	5460	ABANDONED	39.145858	-80.691493
21	4701702763	Doddridge	F Brown	Beta Helix Energy, LLC	Big Injun (undiff)	Gas w/ Oil Show	2223	ACTIVE	39.130689	-80.683546
22	4701702779	Doddridge	M Tota	Berry Energy, Inc.	Squaw	Gas	2420	ABANDONED	39.136127	-80.686817
23	4701702780	Doddridge	M Toia	Devon Energy Corporation	Big Injun (undiff)	Gas	2480	PLUGGED	39.138767	-80.685171
24	4701702781	Doddridge	H & E Droppleman	Beta Helix Energy, LLC	Alexander	Gas	5548	ACTIVE	39.134076	-80.686688
25	4701702782	Doddridge	Roy Church	Rockwell Resources, LLC	Big Injun (undiff)	Dry	2356	PLUGGED	39.132651	-80.684795
26	4701702846	Doddridge	W S Wysong	Beta Helix Energy, LLC	Alexander	Gas	5454	ACTIVE	39.133551	-80.689327
27	4701702848	Doddridge	W S Wysong	Beta Helix Energy, LLC	Alexander	Gas	5500	ACTIVE	39.138240	-80.690078
28	4701702851	Doddridge	H Schmidt	Beta Helix Energy, LLC	Alexander	Gas	5465	ACTIVE	39.117851	-80.682994
29	4701702864	Doddridge	J A Shaver	Beta Helix Energy, LLC	Alexander	Gas	5220	ACTIVE	39.122745	-80.684814
30	4701702930	Doddridge	Glen Rastle	Beta Helix Energy, LLC	Alexander	Gas	5400	ACTIVE	39.112484	-80.682112
31	4701702956	Doddridge	Kenneth Capp	Rural Resources, LLC	Brallier	Gas	5495	ABANDONED	39.148232	-80.696245
32	4701703025	Doddridge	Thomas B Smith	Beta Helix Energy, LLC	Elk	Oil and Gas	5579	ACTIVE	39.142490	-80.675598
33	4701703026	Doddridge	Roy Church	Beta Helix Energy, LLC	Alexander	Gas	5484	ACTIVE	39.139576	-80.676307

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34	4701703554	Doddridge	Barbara A Doyle	Eastern Gas Transmission & Storage, Inc.	Alexander	Gas	5470	ACTIVE	39.137606	-80.671330
35	4701706094	Doddridge	John F Erwin	Antero Resources Corporation	Marcellus Fm	Gas	7223	ACTIVE	39.152247	-80.695181
36	4701706095	Doddridge	John F Erwin	Antero Resources Corporation	Marcellus Fm	Gas	7248	ACTIVE	39.152273	-80.695164
37	4701706103	Doddridge	John F Erwin	Antero Resources Corporation	Marcellus Fm	Gas	7250	ACTIVE	39.152296	-80.695148
38	4701706150	Doddridge	John F Erwin	Antero Resources Corporation	Marcellus Fm	Gas	7250	ACTIVE	39.152296	-80.695148
39	4704101155	Lewis	U F Starcher	Eastern Gas Transmission & Storage, Inc.	Marcellus Fm	Permit issued	-	NEVER DRILLED	39.152233	-80.695208
40	4704101176	Lewis	Maxwell Hr	UNKOWN	Gantz	Storage	2335	PLUGGED	39.096274	-80.657797
41	4704101178	Lewis	J C Starcher	Eastern Gas Transmission & Storage, Inc.	Gantz	Storage	2457	PLUGGED	39.100547	-80.656014
42	4704101264	Lewis	J Krenn	UNKOWN	Gantz	Storage	2524	ACTIVE	39.093849	-80.662678
43	4704101294	Lewis	J C Starcher	UNKOWN	Gantz	Storage	2490	PLUGGED	39.093040	-80.668907
44	4704101295	Lewis	U F Starcher	UNKOWN	Gantz	Storage	2530	PLUGGED	39.095481	-80.663291
45	4704101297	Lewis	J Krenn	UNKOWN	Gantz	Storage	2538	PLUGGED	39.097542	-80.663115
46	4704101328	Lewis	X Frye	Foster Mining Co.	Gantz	Storage	2577	PLUGGED	39.096546	-80.665425
47	4704101357	Lewis	R F Ruppert	Eastern Gas Transmission & Storage, Inc.	Gantz	Oil	2390	ABANDONED	39.124405	-80.667637
48	4704101409	Lewis	W Walsh	UNKOWN	Gantz	Storage	2450	ACTIVE	39.112751	-80.670788
49	4704101456	Lewis	John Hushion	Eastern Gas Transmission & Storage, Inc.	Gantz	Storage	2380	PLUGGED	39.107269	-80.660987
50	4704101465	Lewis	J Krenn	UNKOWN	Gantz	Oil	2243	PLUGGED	39.103069	-80.677445
51	4704102584	Lewis	Wallace Starcher	Eastern Gas Transmission & Storage, Inc.	Gantz	Storage	2900	PLUGGED	39.093249	-80.671376
52	4704102654	Lewis	Conroy Dennis	Eastern Gas Transmission & Storage, Inc.	Hampshire Grp	Storage	2488	ACTIVE	39.096737	-80.654029
53	4704102657	Lewis	F Maxwell Heirs	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.105648	-80.658501
54	4704102658	Lewis	F Maxwell Heirs	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.101125	-80.658876
55	4704102660	Lewis	F Maxwell Heirs	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.103336	-80.656089
56	4704102661	Lewis	U F Starcher	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.096665	-80.659994
57	4704102661	Lewis	U F Starcher	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.096665	-80.659994
58	4704102741	Lewis	Xavier Frye	Deran Resources, Inc.	UNKNOWN	Storage	-	ACTIVE	39.099024	-80.658615
59	4704102742	Lewis	Xavier Frye	Beta Helix Energy, LLC	Brallier	Gas	5446	ACTIVE	39.126888	-80.669765
60	4704102747	Lewis	Xavier Frye	Beta Helix Energy, LLC	Brallier	Gas	5332	ACTIVE	39.122596	-80.670715
61	4704102755	Lewis	Judith A Rioch	Eastern Gas Transmission & Storage, Inc.	Benson	Gas	5214	ACTIVE	39.122717	-80.665804
62	4704102787	Lewis	Dennis Conroy	Eastern Gas Transmission & Storage, Inc.	Hampshire Grp	Storage	2536	ACTIVE	39.099566	-80.654040
63	4704102789	Lewis	Dennis Conroy	Eastern Gas Transmission & Storage, Inc.	Gantz	Storage	2434	PLUGGED	39.103481	-80.658881
64	4704102798	Lewis	Dennis Conroy	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	2339	PLUGGED	39.108122	-80.658697
65	4704102798	Lewis	U F Starcher	Eastern Gas Transmission & Storage, Inc.	Gantz	Storage	2449	PLUGGED	39.098355	-80.660626
66	4704102799	Lewis	J C Starcher	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	2658	ACTIVE	39.094817	-80.660693
67	4704102801	Lewis	Bernard McCutchen	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	-	PLUGGED	39.106245	-80.666041
68	4704102802	Lewis	Bernard McCutchen	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	-	PLUGGED	39.104786	-80.665954
69	4704102803	Lewis	William Walsh	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.106672	-80.663163
70	4704102804	Lewis	William Walsh	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.106672	-80.663163
71	4704102805	Lewis	William Walsh	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Observation	-	ACTIVE	39.110612	-80.660774
72	4704102806	Lewis	William Walsh	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	2318	PLUGGED	39.104931	-80.661487
73	4704102806	Lewis	Gary L & Virginia C Brown	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	-	PLUGGED	39.104214	-80.667783

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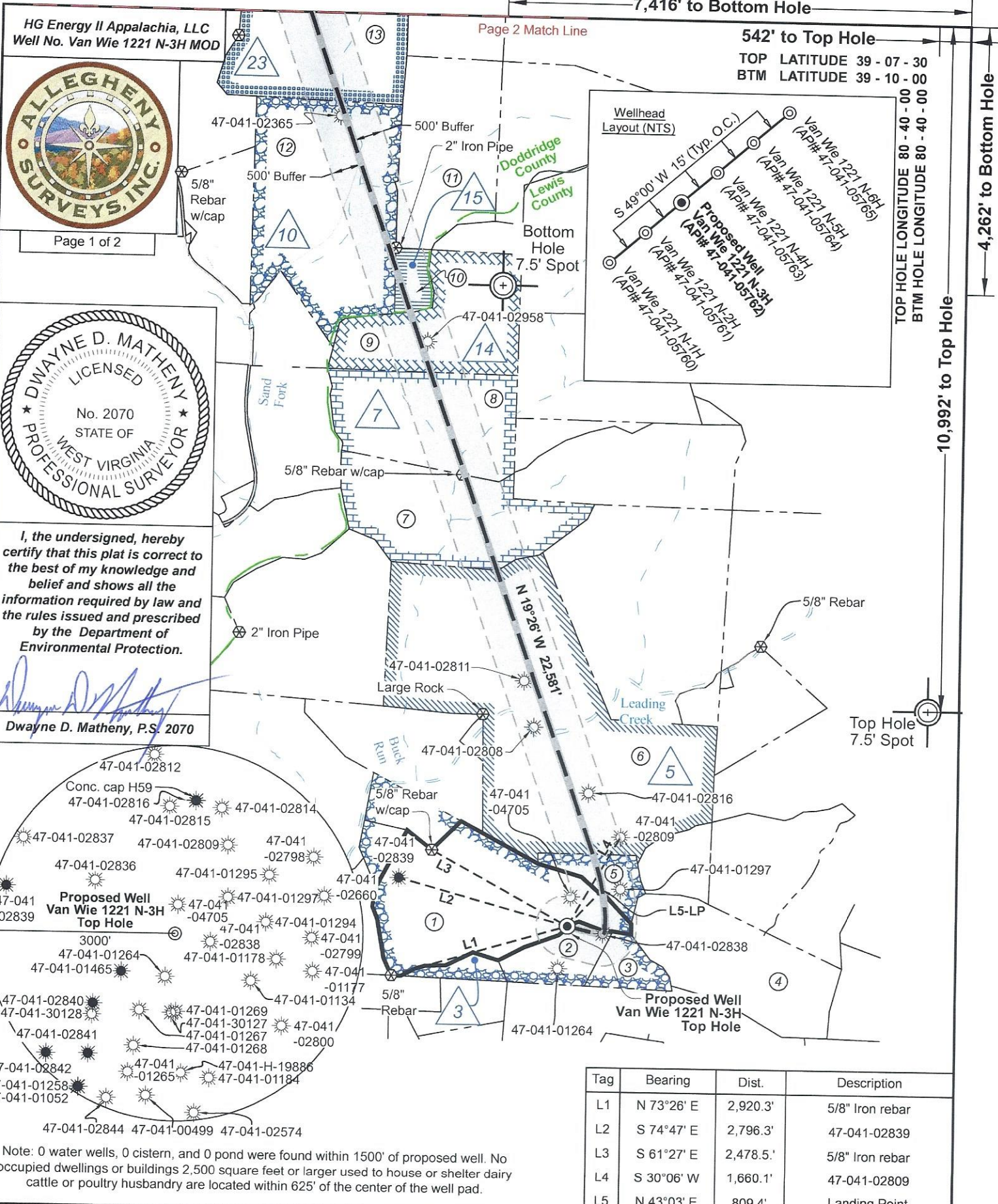
71	4704102807	Lewis	John Tierney	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.103912	-80.672380
72	4704102808	Lewis	Gary L & Virginia C Brown	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	-	PLUGGED	39.103626	-80.670396
73	4704102809	Lewis	John Tierney	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Observation	-	ACTIVE	39.098834	-80.665447
74	4704102810	Lewis	John Tierney	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.105982	-80.668575
75	4704102811	Lewis	Gary L & Virginia C Brown	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	-	PLUGGED	39.105656	-80.670955
76	4704102812	Lewis	Gary L & Virginia C Brown	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	-	PLUGGED	39.102756	-80.665395
77	4704102813	Lewis	Gary L & Virginia C Brown	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	2352	PLUGGED	39.102611	-80.661672
78	4704102814	Lewis	John Tierney	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Observation	-	ACTIVE	39.100444	-80.661590
79	4704102815	Lewis	John Tierney	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	2430	PLUGGED	39.100486	-80.664527
80	4704102816	Lewis	John Tierney	Eastern Gas Transmission & Storage, Inc.	Hampshire Grp	Storage	2595	ACTIVE	39.100750	-80.667282
81	4704102817	Lewis	John M Keely et al	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.101970	-80.674695
82	4704102836	Lewis	Joseph Krenn	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Observation	-	ACTIVE	39.097234	-80.672886
83	4704102837	Lewis	Joseph Krenn	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Storage	-	ACTIVE	39.099071	-80.676947
84	4704102838	Lewis	Joseph Krenn	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	Observation	-	ACTIVE	39.094584	-80.666399
85	4704102859	Lewis	Joseph Brown	Beta Helix Energy, LLC	Alexander	Gas	5465	ACTIVE	39.125074	-80.674728
86	4704102957	Lewis	J Ferrell	Beta Helix Energy, LLC	Alexander	Gas	5421	ACTIVE	39.116095	-80.678971
87	4704102958	Lewis	F & R Brown	Beta Helix Energy, LLC	Benson	Gas w/ Oil Show	5595	ACTIVE	39.120490	-80.676662
88	4704104705	Lewis	Joseph Krenn	Eastern Gas Transmission & Storage, Inc.	Gantz	Oil and Gas	2546	ACTIVE	39.096192	-80.668233
89	4704104787	Lewis	Frank A Altomare Jr	Eastern Gas Transmission & Storage, Inc.	UNKNOWN	not available	-	PLUGGED	39.114199	-80.660444
90	4704105676	Lewis	Downey	Eastern Gas Transmission & Storage, Inc.	-	-	-	NEVER DRILLED	39.118746	-80.663516
WELLS ADDED 1/29/2024										
91	4701700989	Doddridge	Celia Schulte	Southern Triangle Oil Co.	Big Injun (Grnbr)	Oil and Gas	2420	PLUGGED	39.155903	-80.690217
92	4701701029	Doddridge	Celia Schultz	Southern Triangle Oil Co.	Big Injun (Grnbr)	Gas w/ Oil Show	2495	PLUGGED	39.153717	-80.690927
93	4701701075	Doddridge	F M Hinter & A Hunter	Devonian Gas & Oil	Price Fm & equivs	Oil w/ Gas Show	2454	PLUGGED	39.155273	-80.694929
94	4701701103	Doddridge	George Determan	Petroleum Promotions	Big Injun (Grnbr)	Oil and Gas	2288	PLUGGED	39.151934	-80.690851
95	4701702375	Doddridge	Thomas B Smith	Geo Energy, LLC	Brallier	Gas	5425	ABANDONED	39.148482	-80.681388
96	4701702552	Doddridge	G Determan	Greylock Conventional, LLC	Greenland Gap Fm	Gas	5732	ACTIVE	39.147523	-80.688533
97	4701702577	Doddridge	Thomas Smith	Beta Helix Energy, LLC	Greenland Gap Fm	Gas	5401	ACTIVE	39.151528	-80.685310
98	4701702707	Doddridge	Kenneth Capp	Rural Resources, LLC	Alexander	Gas	5644	ABANDONED	39.15486	-80.690871
99	4701705226	Doddridge	John F Erwin	Berry Energy, Inc.	Greenland Gap Fm	Gas	3410	ACTIVE	39.153122	-80.694241
100	4701706150	Doddridge	John F Erwin	Antero Resources Appalachian Corp.	Marcellus Fm	NA	NA	NEVER DRILLED	39.152233	-80.695208
101	4701706151	Doddridge	John F Erwin	Antero Resources Appalachian Corp.	Marcellus Fm	NA	NA	NEVER DRILLED	39.156687	-80.695704
102	4701706165	Doddridge	John F Erwin	Antero Resources Appalachian Corp.	Marcellus Fm	Gas	7246	ACTIVE	39.156790	-80.695742

SOURCE: WVGES DATASET (2020) and WVDEP WEBSITE AND FIELD SURVEYS

UPDATED 10/18/2024

YELLOW DENOTES WELL WITH TVD > 4,500'

GREEN DENOTES SURVEYED WELLS



HG Energy II Appalachia, LLC
 Well No. Van Wie 1221 N-3H MOD

ALLEGHENY SURVEYS, INC.

Page 1 of 2



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

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

Proposed Well Van Wie 1221 N-3H Top Hole

3000'

Note: 0 water wells, 0 cistern, and 0 pond were found within 1500' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.

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

FILE NO: 170-12-30-FC-22
 DRAWING NO: Van Wie 1221 N-3H Well Plat
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

DATE: October 14 20 24
 OPERATOR'S WELL NO. Van Wie 1221 N-3H
 API WELL NO
 47 - 041 - 05762
 STATE COUNTY PERMIT

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

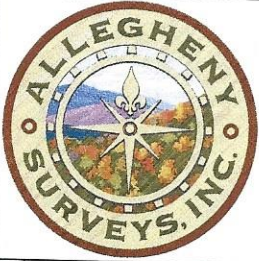
LOCATION: ELEVATION: 1,251.77' WATERSHED: Fink Creek QUADRANGLE: Vadis
 DISTRICT: Freemans Creek COUNTY: Lincoln

SURFACE OWNER: HG Energy II Appalachia, LLC, et al ACREAGE: 131.85
 ROYALTY OWNER: Joseph Krenn, et al LEASE NO: ACREAGE: 245

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL - MOD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,035' TVD 30,081' MD

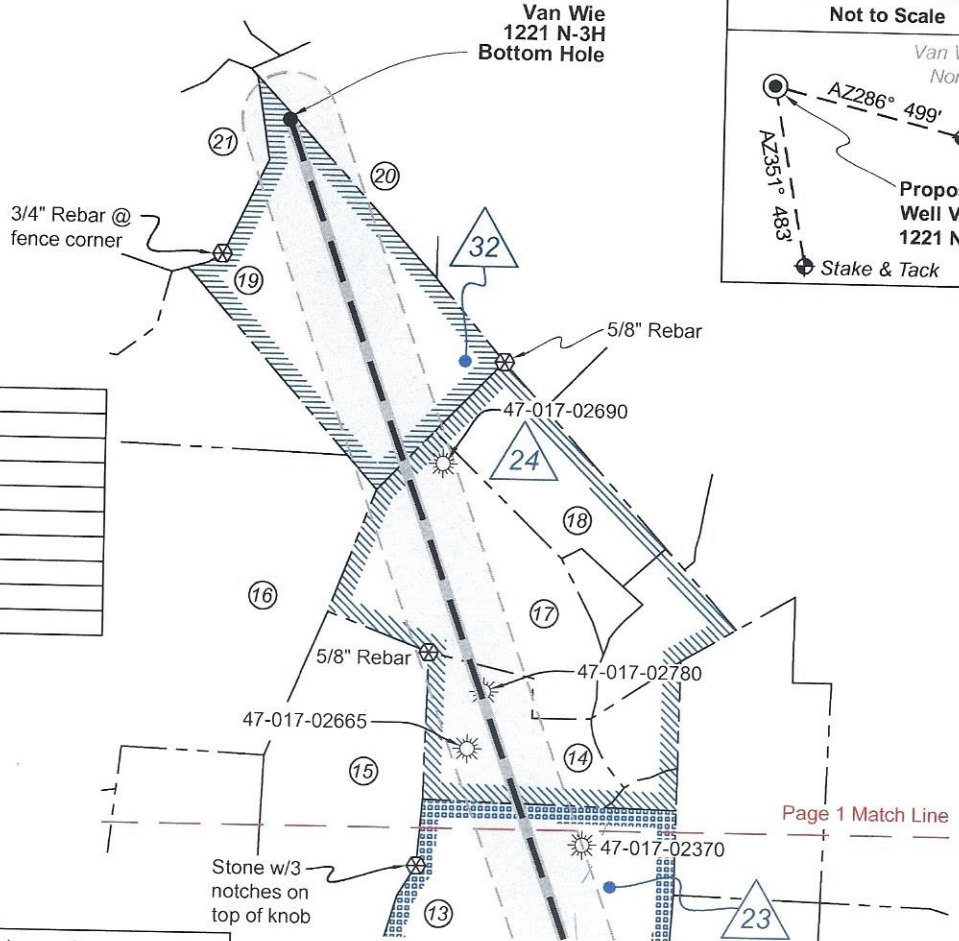
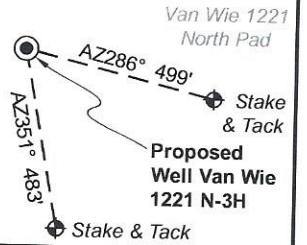
WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White
 ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road
 Parkersburg, WV 26101 Parkersburg, WV 26101

HG Energy II Appalachia, LLC
Well No. Van Wie 1221 N-3H MOD



Page 2 of 2

Well Location References
Not to Scale



ID	Lease
3	Joseph Krenn, et ux
5	John Tierney
7	William E. Ruppert, et al
10	Fonce Brown & Rita Brown
14	HG Energy II Appalachia, LLC
15	Tygart Resources, Inc., et al
23	HG Energy II Appalachia, LLC
24	Stella Severin, et al
32	George J. Determan, et ux

West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.

Notes: Well No. Van Wie 1221 N-3H
WVCS 1927, North Zone
Top Hole Coordinates
Lat: 39°05'41.31"
Lon: 80°40'06.88"
Landing Point Coordinates
Lat: 39°05'47.14"
Lon: 80°39'59.84"
Bottom Hole Coordinates
Lat: 39°09'17.86"
Lon: 80°41'34.18"

Legend	
	Proposed gas well
	Well Reference, as noted
	Monument, as noted
	Existing Well, as noted
	Existing Plugged Well, as noted
	Digitized Well, as noted
	Creek or Drain
	Existing Road
	Surface boundary (approx.)

UTM Zone 17, NAD 1983
Plat orientation and corner and well references are based upon the grid north meridian. Well location references are based upon the magnetic meridian.

Notes: Well No. Van Wie 1221 N-3H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,197,346.51'
E: 1,734,496.23'
Landing Point Coordinates
N: 14,197,937.95'
E: 1,735,048.73'
Bottom Hole Coordinates
N: 14,219,223.18'
E: 1,727,542.09'

Notes: Well No. Van Wie 1221 N-3H
UTM NAD 1983 (Meters)
Top Hole Coordinates
N: 4,327,359.871m
E: 528,675.508m
Landing Point Coordinates
N: 4,327,540.142m
E: 528,843.911m
Bottom Hole Coordinates
N: 4,334,027.893m
E: 526,555.882m

Lewis Co. (Freemans Creek Dist.)				
No.	TM / Par	Owner	Bk / Pg	Ac.
1	2D / 3	HG Energy II Appalachia, LLC	800 / 637	131.85
2	2D / 29	Anthony S. & Dawn H. VanWie	732 / 622	26.63
3	2D / 30	Anthony S. & Dawn H. VanWie	732 / 622	19.00
4	2D / 37	Jacob R. Straley Heirs	728 / 53	97.00
5	2D / 3.1	HG Energy II Appalachia, LLC	800 / 637	20.00
6	2C / 7	James R. & Shelia A. Gum, II	721 / 350	350.78
7	2C / 4	Susanne Securro	725 / 199	111.75
8	2C / 3	Stephen Ruppert	666 / 428	102.46
9	2C / 2	Clarence D. Brown	W4 / 572	96.50
Doddridge Co. (Cove Dist.)				

No.	TM / Par	Owner	Bk / Pg	Ac.
10	10 / 13	Clarence D. Brown	W20 / 306	12.50
11	10 / 15.1	Scott Flanagan, et al	239 / 591	101.56
12	10 / 14	Clarence D. Brown	W20 / 306	180.00
13	6 / 11	Joseph D. & Darlene K. Church	244 / 451	107.60
14	6 / 10.1	Leah Kelly	488 / 492	52.83
15	10 / 5	Edith G. Wilson Trust	255 / 247	159.30
16	6 / 9	Marcella Yeater	328 / 667	193.00
17	6 / 10.3	Brandon W. Gilbert	211 / 126	104.90
18	6 / 10.2	Robert Johnson & Ricky Jenkins	505 / 637	51.84
19	6 / 4	Mary A. Ruddy & Teigh R. Byrne	226 / 360	140.00
20	3 / 1	Mary A. Ruddy & Teigh R. Byrne	218 / 120	52.25
Doddridge Co. (New Milton Dist.)				

No.	TM / Par	Owner	Bk / Pg	Ac.
21	19 / 12	Sandra E. Erwin	W80 / 32	79.30

FILE NO: 170-12-30-FC-22
DRAWING NO: Van Wie 1221 N-3H Well Plat
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

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

DATE: October 14 20 24
OPERATOR'S WELL NO. Van Wie 1221 N-3H
API WELL NO
47 — 041 — 05762
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
LOCATION: ELEVATION: 1,251.77' WATERSHED: Fink Creek QUADRANGLE: Vadis
DISTRICT: Freemans Creek COUNTY: Putnam
SURFACE OWNER: HG Energy II Appalachia, LLC, et al ACREAGE: 131.85
ROYALTY OWNER: Joseph Krenn, et al LEASE NO: ACREAGE: 245
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL - MOD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,035' TVD 30,081' MD

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

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

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

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

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

****See Attached Sheets****

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WV Department of
Environmental Protection

Co-Tenancy utilization - At least 75% of the royalty owners have consented to the lawful use or development of the natural gas mineral property on the tract. The interests of the remaining co-tenants will be secured pursuant to the Co-Tenancy Act
Horizontal Well Unit Utilization - Subject to unitization filing with the WV Oil and Gas Conservation Commission

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

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

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

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

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

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NOV 08 2024
WV Department of
Environmental Protection

**HG Energy II Appalachia, LLC
Van Wie 1221 N-3H Lease Chain**

1221N Tract	LEGACY LEASE NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE
3	FK054825 FK079440 FEE	03-002D-0003-0000 03-002D-0003-0001 03-002D-0003-0003 03-002D-0028-0000 03-002D-0029-0000 03-002D-0030-0000	Q100903000	JOSEPH KRENN AND EMILY E. KRENN, HIS WIFE	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	33	232
				WILLIAM A. LOUWTHER	SOUTH PENN OIL COMPANY	NOT LESS THAN 1/8	42	401
				SOUTH PENN OIL COMPANY	SOUTH PENN NATURAL GAS CO	ASSIGNMENT	156	570
				SOUTH PENN NATURAL GAS CO	HOPE NATURAL GAS COMPANY	ASSIGNMENT	166	494
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	9	628
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	672	154
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY INC	NOT LESS THAN 1/8	692	570
				DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
				DOMINON TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736	220
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	MINERAL DEED	740	746
				5	FK082810 FK056828	03-002C-0007-0000	Q100341000	JOHN TIERNEY
SOUTH PENN OIL COMPANY	SOUTH PENN NATURAL GAS CO	ASSIGNMENT	156					570
SOUTH PENN NATURAL GAS CO	HOPE NATURAL GAS COMPANY	ASSIGNMENT	166					494
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294					89
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425					127
CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS					
CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	672					154
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CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717					1
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722					170
DOMINON TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723					499
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734					558
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736					220

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7	RECEIVED Office of Oil and Gas NOV 08 2024 WV Department of Environmental Protection	03-002C-0003-0000 03-002C-0004-0000 p/o 03-002C- 0002-0000 p/o 03-002C-0007-00001	Q100598000	WILLIAM E. RUPPERT, WIDOWER; ROY F. RUPPERT, WIDOWER; AGNES RILEY AND MARTIN J. RILEY, HER HUSBAND; CHARLES F. RUPPERT AND W. E. RUPPERT, ATTORNEY IN FACT FOR CLARA RUPPERT HUNKLER; B. A. MAYBURY, HENRY MAYBURY, FRED MAYBURY, GILBERT MAYBURY, NORA KESSEN, NORA MAYBURY, GERTRUDE MAYBURY, CATHERINE MAYBURY, MARCELLA MAYBURY, BEN KESSEN, JOHN RUPPERT, CATHERINE RUPPERT, JOE RUPPERT, MARIAH RUPPERT, ADELINE ROUGH, LEE ROUGH, CLARA HUNKLER, EDWARD HUNKLER, LEWIS RUPPERT, NORA RUPPERT; NORA MAYBURY, GUARDIAN FOR HERMAN J. MAYBURY; ANDREW B. MAYBURY, MARCELLA C. MAYBURY, JOSEPH A. MAYBURY, EDWARD C. MAYBURY AND MAY E. MAYBURY; MAYBELLE RUPPERT, SINGLE; MAYBELLE RUPPERT, GUARDIAN FOR MICHAEL RUPPERT; C. O. DENNISON AND DAISY I. DENNISON, HIS WIFE	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. DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINON TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY 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. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8 CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) NOT LESS THAN 1/8 PARTIAL ASSIGNMENT (32%) ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT ASSIGNMENT (68%) MINERAL DEED	223 294 425 WVSOS WVSOS 672 684 692 712 717 722 WVSOS 723 734 736 740	178 89 127 WVSOS WVSOS 154 57 570 848 1 170 WVSOS 499 558 220 746
14	FK079362 FEE	p/o 03-002C-0002-0000	FK079362 FEE	DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	MINERAL DEED	740	746	
15	HGII02609; HGII02920	02-0010-0013-0000	HGII02609; HGII02920	Tygart Resources, Inc., a West Virginia Corporation Thomas E Blandford, III, President The Board of Trustees of Davis & Elkins College Robert Hardman, Vice President for Finance and Administration	HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8 NOT LESS THAN 1/8 NOT LESS THAN 1/8	508 512	440 224	
				FONCE BROWN AND RITA BROWN, BROTHER AND SISTER, BOTH SINGLE FONCE BROWN, SINGLE, AND RITA B. BROWN, SINGLE GLENN LOCKHART DBA CAPITAL PETROLEUM COMPANY FOSSIL PETROLEUM COMPANY GLENN LOCKHART DBA CAPITAL PETROLEUM COMPANY STONESTREET LANDS COMPANY ABARTA OIL AND GAS CO INC CPC ENERGY SBS (B) LP, SUCCESSOR PARTNERSHIP TO GLENVILLE 1979 ROCKWELL PETROLEUM COMPANY CARSON PETROLEUM CORPORATION CARSON PETROLEUM CORPORATION CARSON PETROLEUM CORPORATION	CAPITAL PETROLEUM ROCKWELL PETROLEUM COMPANY FOSSIL PETROLEUM COMPANY GLENN LOCKHART DBA CAPITAL PETROLEUM COMPANY STONESTREET LANDS COMPANY ROCKWELL PETROLEUM COMPANY ANTERO RESOURCES APPALACHIAN CORPORATION ANTERO RESOURCES APPALACHIAN CORPORATION CARSON PETROLEUM CORPORATION CPC 78-F, LTD CPC 78-F, LTD HS I-A, LTD	NOT LESS THAN 1/8 NOT LESS THAN 1/8 ASSIGNMENT ASSIGNMENT ASSIGNMENT ASSIGNMENT ASSIGNMENT ASSIGNMENT PARTIAL ASSIGNMENT PARTIAL ASSIGNMENT PARTIAL ASSIGNMENT PARTIAL ASSIGNMENT	100 107 100 101 101 107 261 275 108 109 109 109	462 672 672 134 131 717 463 83 349 18 20 143	

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ROCKWELL PETROLEUM COMPANY	CARSON PETROLEUM CORPORATION	PARTIAL ASSIGNMENT	110	553
ROCKWELL PETROLEUM COMPANY	CARSON PETROLEUM CORPORATION	PARTIAL ASSIGNMENT	112	441
CARSON PETROLEUM CORPORATION	ROYAL W. CARSON, JR.	PARTIAL ASSIGNMENT	112	229
CARSON PETROLEUM CORPORATION	HS II-B, LTD	PARTIAL ASSIGNMENT	112	225
CARSON PETROLEUM CORPORATION	ROYAL W. CARSON, JR.	PARTIAL ASSIGNMENT	112	230
CARSON PETROLEUM CORPORATION	THOMAS E. EVANS	PARTIAL ASSIGNMENT	112	283
CARSON PETROLEUM CORPORATION	CPC 79-G LTD	PARTIAL ASSIGNMENT	112	290
CARSON PETROLEUM CORPORATION	CPC 79-H LTD	PARTIAL ASSIGNMENT	112	296
CARSON PETROLEUM CORPORATION	ROYAL W. CARSON, III	PARTIAL ASSIGNMENT	112	308
CARSON PETROLEUM CORPORATION	ROYAL W. CARSON, III	PARTIAL ASSIGNMENT	112	310
CARSON PETROLEUM CORPORATION	ROYAL W. CARSON, III	PARTIAL ASSIGNMENT	112	311
ROCKWELL PETROLEUM COMPANY	CARSON PETROLEUM CORPORATION	PARTIAL ASSIGNMENT	112	443
ROCKWELL PETROLEUM COMPANY	EMILY E. CARSON	PARTIAL ASSIGNMENT	114	575
ROCKWELL PETROLEUM COMPANY	ROYAL W. CARSON, JR.	PARTIAL ASSIGNMENT	114	579
ROCKWELL PETROLEUM COMPANY, ROBERT R. JONES, AND MARK R. WORL	CARSON PETROLEUM CORPORATION	ASSIGNMENT	123	820
CARSON PETROLEUM CORPORATION; ROYAL W. CARSON, III; MACK R. WORL; ROYAL W. CARSON, JR.; AND EMILY CARSON	DEVON ENERGY CORPORATION (NEVADA)	ASSIGNMENT	126	434
THOMAS E. EVANS, AN INDIVIDUAL	DEVON ENERGY CORPORATION	ASSIGNMENT	127	670
CARSON PETROLEUM CORPORATION	GLENVILLE 1979	PARTIAL ASSIGNMENT	128	181
CARSON PETROLEUM CORPORATION	GLENVILLE 1979	PARTIAL ASSIGNMENT	128	183
CARSON PETROLEUM CORPORATION	CANDID COLOR SYSTEMS INC	PARTIAL ASSIGNMENT	138	707
CANDID COLOR SYSTEMS INC	CANDID OIL & GAS INC	ASSIGNMENT	139	16
DEVON ENERGY CORPORATION AND DEVON RESOURCE INVESTORS, A LIMITED PARTNERSHIP	DEVON INVESTORS LTD	MERGER/NAME CHANGE	WVSOS	
HS I-A	HS CONSOLIDATED GROWTH PARTNERSHIP	PARTIAL ASSIGNMENT	139	447
HS CONSOLIDATED GROWTH PARTNERSHIP	HS RESOURCES, INC	ASSIGNMENT	153	467
HS CONSOLIDATED GROWTH PARTNERSHIP	HS RESOURCES, INC	PARTIAL ASSIGNMENT	153	477
HS CONSOLIDATED ASSET PARTNERSHIP	HS RESOURCES, INC	PARTIAL ASSIGNMENT	153	500
DEVON INVESTORS LTD	DEVON ENERGY CORPORATION (DELAWARE)	ASSIGNMENT	156	436
HS RESOURCES, HS CONSOLIDATED ASSET PARTNERSHIP, HS CONSOLIDATED GROWTH PARTNERSHIP, AND HG/SHB JOINT VENTURE	DEVON ENERGY CORPORATION	ASSIGNMENT	158	408
DEVON ENERGY CORPORATION (NEVADA)	ABARTA OIL AND GAS COMPANY INC (90%)	ASSIGNMENT	178	682
ABARTA OIL AND GAS CO INC	ALLEGHENY INTERESTS INC (10%)	ASSIGNMENT	261	463
GLENVILLE 1979	ANTERO RESOURCES APPALACHIAN CORPORATION	ASSIGNMENT	275	83
CPC ENERGY SBS (B) LP, SUCCESSOR PARTNERSHIP TO GLENVILLE 1979	CPC ENERGY SBS (B) LP	MERGER/NAME CHANGE		
CPC ENERGY SBS (B) LP, SUCCESSOR PARTNERSHIP TO GLENVILLE 1979	ANTERO RESOURCES APPALACHIAN CORPORATION	ASSIGNMENT	275	83
ANTERO RESOURCES APPALACHIAN CORPORATION	ANTERO RESOURCES CORPORATION	MERGER/NAME CHANGE	WVSOS	
ANTERO RESOURCES CORPORATION	CNX GAS COMPANY LLC AND NOBLE ENERGY INC	PARTIAL TERM ASSIGNMENT	411	478
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	377	212
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	388	34
ANTERO RESOURCES CORPORATION	HG ENERGY II APPALACHIA, LLC	PARTIAL ASSIGNMENT	508	442
CP LEASE HOLDINGS & ROBERT R JONES II	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	520	563
HAL MCKINGHT	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	AB 8	722
LOCATOR'S OIL AND GAS, INC	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	511	291
PATSY HAMMERT	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	511	282
SHAMROCK OIL AND GAS INC	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	817	343
ANTERO RESOURCES CORPORATION	HG ENERGY II APPALACHIA, LLC	Drilling & Permission to Permit Agreement	543	107
H.J. DROPPLEMAN	CONSOLIDATED GAS SUPPLY CORPORATION	PARTIAL ASSIGNMENT		
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS SUPPLY CORPORATION	NOT LESS THAN 1/8	93	151
CONSOLIDATED GAS TRANSMISSION CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
CNG TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	

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DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC	MEMORANDUM OF FARMOUT AGREEMENT	672	154
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY INC	NOT LESS THAN 1/8	692	570
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
DOMINON TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE		WVSOS
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736	220
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	MINERAL DEED	740	746
STELLA SEVERIN, A WIDOW; AND ARDEN J. ASHCRAFT, A SINGLE MAN	DONALD S. GARVIN	NOT LESS THAN 1/8	93	344
DONALD S. GARVIN	JOHN R. WARREN	ASSIGNMENT	93	723
JOHN R. WARREN	CLAUDE BARTON, JOHN CHIAF, JOE H. CUNNINGHAM, JR.; DEVONSHIRE INVESTMENT CO., H. L. HODGES, J. D. HODGES, STAN LITTLETON, COLONEL H. NELSON, PETER G. PIERCE, VIRGINIA PIERCE, CHARLES PURCELL, JR.; H. E. RAINBOLT, HARRY SCHNITTGER, H. SETH WOOD, TOM G. YARBRO	ASSIGNMENT	94	501
TOM G. YARBRO	JOHN R. WARREN, DBA, WARREN DRILLING COMPANY	ASSIGNMENT	99	95
CHARLES PURCELL, JR	JOHN R. WARREN, DBA, WARREN DRILLING COMPANY	ASSIGNMENT	99	287
STAN LITTLETON	N.R. LITTLETON	ASSIGNMENT	100	248
H. L. HODGES	JOHN R. WARREN	ASSIGNMENT	104	253
CLAUDE BARTON, JOHN CHIAF, JOE H. CUNNINGHAM, JR; DEVONSHIRE INVESTMENT CO., J. D. HODGES, N. R. LITTLETON, COLONEL H. NELSON, PETER G. PIERCE, H. E. RAINBOLT, HARRY SCHNITTGER, ROMAYNE WARREN, H. SETH WOOD	JOHN R. WARREN, DBA, WARREN DRILLING COMPANY	ASSIGNMENT	104	265
CLAUDE BARTON, JOHN CHIAF, JOE H. CUNNINGHAM, JR; DEVONSHIRE INVESTMENT CO., J. D. HODGES, N. R. LITTLETON, COLONEL H. NELSON, PETER G. PIERCE, VIRGINIA PIERCE, H. E. RAINBOLT, HARRY SCHNITTGER, H. SETH WOOD	JOHN R. WARREN, DBA, WARREN DRILLING COMPANY	ASSIGNMENT	104	270
JOHN R. WARREN, DBA WARREN DRILLING COMPANY	ROCKWELL PETROLEUM COMPANY	ASSIGNMENT	104	254
ROCKWELL PETROLEUM COMPANY	CPC 78-E	ASSIGNMENT	107	697
ROCKWELL PETROLEUM COMPANY	CPC 78-E	ASSIGNMENT	107	698
ROCKWELL PETROLEUM COMPANY	ROBERT R. JONES	ASSIGNMENT	127	224
ROCKWELL PETROLEUM COMPANY	MACK R. WORL	ASSIGNMENT	129	636
CARSON PETROLEUM CORPORATION, ROYAL W. CARSON III, MACK R. WORL, ROYAL W. CARSON JR, AND EMILY CARSON	DEVON ENERGY CORPORATION	ASSIGNMENT	126	434
DEVON ENERGY CORPORATION (NEVADA)	ROBERT R. JONES	ASSIGNMENT	179	373
ROBERT R. JONES, INDIVIDUALLY, JUDITH L. JONES, INDIVIDUALLY, AND ROBERT R. JONES D/B/A CONTINENTAL PETROLEUM COMPANY	CONTINENTAL PETROLEUM LLC	ASSIGNMENT	191	128
ROCKWELL PETROLEUM COMPANY; ROCKWELL PETROLEUM CORPORATION; ROCKWELL RESOURCES, LLC; MACKR. WORL; MARCIE WORL KIRCHBERG; AND RICHARD CRAIG WORL, AND THEIR AFFILIATES AND COMPANIES	ROBERT R. JONES	ASSIGNMENT	260	429
CONTINENTAL PETROLEUM, AND ROBERT R. JONES	ANTERO RESOURCES APPALACHIAN CORPORATION	ASSIGNMENT	267	497
ROCKWELL RESOURCES LLC	ANTERO RESOURCES APPALACHIAN CORPORATION	ASSIGNMENT	267	244
ANTERO RESOURCES APPALACHIAN CORPORATION	ANTERO RESOURCES CORPORATION	MERGER/NAME CHANGE		WVSOS
ANTERO RESOURCES CORPORATION	HG ENERGY II APPALACHIA, LLC	PARTIAL ASSIGNMENT	531	124
ANTERO RESOURCES CORPORATION	HG ENERGY II APPALACHIA, LLC	PARTIAL ASSIGNMENT	543	107

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32	ARC-48372	RECEIVED Office of Oil and Gas NOV 08 2024	WV Department of Environmental Protection	ARC-48372	GEORGE J. DETERMAN AND JOSEPHINE F. DETERMAN, HIS WIFE	W.B. BERRY	NOT LESS THAN 1/8	105	309
					W.B. BERRY	J & J ENTERPRISES INC	ASSIGNMENT	112	245
					J & J ENTERPRISES INC	BENSON DRILLING JOINT VENTURE NO. 3	JOINT VENTURE AND ASSIGNMENT	112	251
					J & J ENTERPRISES INC	EASTERN AMERICAN ENERGY CORPORATION	CONFIRMATORY DEED	159	139
					BENSON DRILLING ASSOCIATES NO. 3	EASTERN AMERICAN ENERGY CORPORATION	ASSIGNMENT	166	499
					BENSON DRILLING JOINT VENTURE NO. 3	EASTERN AMERICAN ENERGY CORPORATION	ASSIGNMENT	167	288
					BENSON DRILLING JOINT VENTURE NO. 3	EASTERN AMERICAN ENERGY CORPORATION	ASSIGNMENT	167	292
					EASTERN AMERICAN ENERGY CORPORATION	ENERGY CORPORATION OF AMERICA	MERGER/NAME CHANGE	240	498
					ENERGY CORPORATION OF AMERICA	EASTERN ENERGY CORPORATION OF AMERICA	CONFIRMATORY DEED	240	498
					EASTERN AMERICAN ENERGY CORPORATION	ENERGY CORPORATION OF AMERICA	MERGER/NAME CHANGE	283	431
					ENERGY CORPORATION OF AMERICA	ANTERO RESOURCES APPALACHIAN CORPORATION	ASSIGNMENT	272	307
					ANTERO RESOURCES APPALACHIAN CORPORATION	ANTERO RESOURCES CORPORATION	MERGER/NAME CHANGE	46	523
					ENERGY CORPORATION OF AMERICA	ANTERO RESOURCES CORPORATION FKA ANTERO RESOURCES APPALACHIAN CORPORATION	ASSIGNMENT	328	648
					David B. Berry, Trustee of the WB Berry Energy Testamentary Trust of Susan Tamminga	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	535	136
					David B. Berry, Trustee of the WB Berry Energy Testamentary Trust of Susan Tamminga	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	353	136
					ANTERO RESOURCES CORPORATION	HG ENERGY II APPALACHIA, LLC	PARTIAL ASSIGNMENT	531	124
					ANTERO RESOURCES CORPORATION	HG ENERGY II APPALACHIA, LLC	PARTIAL ASSIGNMENT	543	107



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

*Ch # 47461
7500.00*

October 17, 2024

WV DEP
Division of Oil & Gas
Attn: Cragin Blevins
601 57th Street
Charleston, West Virginia 25304

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Office of Oil and Gas

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WV Department of
Environmental Protection

RE: Van Wie 1221 N-3H Drill Permit Revision Request – (47-041-05762)
Freemans Creek District, Lewis County
West Virginia

Dear Mr. Blevins -

Per our discussions, enclosed are revised forms (survey plat, mylar, AOR, WW-6B, casing schematic, and WW-6A1) and a check for expedited service for the 1221 N-3H well work drill permit revision request. We ask the permit to be modified to include additional acquired leases and revised well plans for the lateral.

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

Very truly yours,

Diane White

Diane C. White

Enclosures

cc: Ken Greynolds – WV DEP State Inspector

12/06/2024