



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
(304) 926-0450
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Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Wednesday, May 3, 2023
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit Modification Approval for VANECK 1215 S-12H
47-041-05738-00-00

Lateral Extension/ Casing Revision

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

James A. Martin
Chief

Operator's Well Number: VANECK 1215 S-12H
Farm Name: HG ENERGY II, APPALACHIA, LLC, ET AL
U.S. WELL NUMBER: 47-041-05738-00-00
Horizontal 6A New Drill
Date Modification Issued: 05/03/2023

Promoting a healthy environment.

05/05/2023

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 494519932 Lewis Freeman Camden 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Vaneck 1215 S-12H Well Pad Name: Vaneck 1215

3) Farm Name/Surface Owner: HG Energy II Appalachia, LLC Public Road Access: Mare Run Rd at CR 10 / 9

4) Elevation, current ground: 1259' Elevation, proposed post-construction: 1254.8'

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 7015'/7088' and 73' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 7,040'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 32,079'

11) Proposed Horizontal Leg Length: 23,005'

12) Approximate Fresh Water Strata Depths: 60', 214', 600', 861'

13) Method to Determine Fresh Water Depths: Nearest offset well data, (47-041-02173, 0693, 0236, 2308, 0578)

14) Approximate Saltwater Depths: 1605'

15) Approximate Coal Seam Depths: 272', 700', 1040', 1150' (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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WW-6B
(04/15)

4704105738
 API NO. 47- - -
 OPERATOR WELL NO. Vaneck 1215 S-12H
 Well Pad Name: Vaneck 1215

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	1200'	1200' ✓	40% Excess, CTS
Intermediate 1	13 3/8"	NEW	J-55 BTC	68	2250'	2250' ✓	40% Excess, CTS
Intermediate 2	9 5/8"	NEW	N-80 BTC	40	6400'	6400' ✓	40% Excess Tail, CTS
Production	5 1/2"	NEW	P-110 HP	23	32079'	32079' ✓	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: 2023.04.19 11:17:02 -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 = 1.10, tail yield 1.00
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				RECEIVED Office of Oil and Gas
Depths Set:				APR 24 023

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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 7040'. Drill horizontal leg to estimated 23,005' lateral length, 32,079' 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): 22.55 acres

22) Area to be disturbed for well pad only, less access road (acres): 8.70 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.

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

Conductor - N/A, Casing to be drilled in w/ Dual Rotary Rig.
Fresh Water/Coal - *15.6 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 VBWOB And Foam / D202 - 0.15% BWOB Dispersant / D095 1.5 lb per BBL CemNET* - 80% 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 - 0.35% BWOB GasBLOK* / D013 - 0.3% BWOB Retarder / D047 - 0.02 gal / sack Anti 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.

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*Note: Attach additional sheets as needed.



1215 S-12H
Marcellus Shale Horizontal
Lewis County, WV

*** 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 - 0.6% 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

Ground Elevation		1215 S-12H SHL		1215 S-12H LP		1215 S-12H BHL		1215 S-12H SHL		1215 S-12H LP		1215 S-12H BHL								
Azim		1254.8'		160.54°		1254.8'		160.54°		1254.8'		160.54°								
WELLBORE DIAGRAM	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										
	26"	20" 94# J-55	Fresh Water	0	214, 600, 861	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										
			Kilnning Coal	900	905															
			Fresh Water Protection	0	1200															
	17.5"	13-3/8" 66# J-55 BTC	Little Lime	1694	1714	AIR / KCL - Salt Polymer	See above (LEFT) for Storage String Cement Blend to Meet DTT 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										
			Big Lime	1741	1818															
			Injur / Gantz (Storage)	1818 / 2073	1904 / 2125															
			Intermediate 1	0	2250															
		12.25"	9-5/8" 40# N-80 BTC	Thirty Foot	2274	2286	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									
				Gordon Stray / Gordon	2320 / 2346	2336 / 2446														
5th Sand				2590	2612															
Bayard				2660	2675															
Speechley				3287	3301															
Benson				4599	4615															
Alexander / Elk				4930 / 5540	5100 / 5600															
Intermediate 2				0	TVD: 5650' / MD: 6400' Inc: 45 deg.															
8.75"				5-1/2" 23# P-110 HP CDC HTQ	Rhinestreet	6203						6444	AIR / 9.0ppg SOBMM	Lead: 14.5 ppg POZ:PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FPI3L + 0.3% bwoc MPA170	Run 1 spiral centralizer every 5 joints from the top of the curve to surface.	Once casing is at setting depth, 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	6444						6650								
8.5" Curve	8.5" Lateral	Middlesex	6650	6734	11.5ppg-12.5ppg SOBMM	Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FPI3L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess Lead Yield=1.19 Tail Yield=1.94 CTS	Run 1 spiral centralizer every 3 joints from the 1st 5.5" long joint to the top of the curve.													
		West River	6734	6831																
		Burkett	6831	6864																
		Tully Limestone	6864	6950																
		Hamilton	6950	6753																
		Marcellus	7015	7088																
TMD / TVD (Production)	32079	7040																		
Onondaga	7088																			

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LP @ 7040' TVD / 9074' MD
 8.5" Hole - Cemented Long String
 5-1/2" 23# P-110 HP CDC HTQ
 +/-23005' ft. Lateral
 TD @ +/-7040' TVD +/-32079' MD

4704105738

EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:
VANECK 1215 SOUTH UNIT AND PROPOSED WELLS S-7H, S-8H, S-9H, S-10H, S-11H & S-12H

CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4704100049	Lewis	Alfred Woolfer	Dominion Energy Transmission, Inc.	Helderberg	Gas	7325	PLUGGED	39.0803421	-80.530425
2	4704100064	Lewis	R H Hall	Diversified Resources, Inc.	Fifth	Gas	2316	ACTIVE	39.0676449	-80.514534
3	4704100089	Lewis	J L J Bailey	Diversified Production LLC	Helderberg	Gas	7022	ACTIVE	39.0753277	-80.538664
4	4704100238	Lewis	G W Jordon	Dominion Energy Transmission, Inc.	Fifth	Gas	2471	PLUGGED	39.1023388	-80.538855
5	4704100334	Lewis	Alice Burnside	Eastern Gas Transmission & Storage, Inc.	Hampshire Grp	Storage	2478	ACTIVE	39.111415	-80.559086
6	4704100445	Lewis	Urah Rexroad	Lone Pine Operating Co., Inc.	Up Devonian	Gas	2037	ACTIVE	39.061673	-80.509115
7	4704100487	Lewis	A E Wright	Deran Resources, Inc.	Up Devonian	Gas w/ Oil Show	2304	ACTIVE	39.061528	-80.521206
8	4704100497	Lewis	L N Wilfong	Diversified Production LLC	Price Fm & equivs	Gas	1812	ACTIVE	39.058256	-80.508699
9	4704100513	Lewis	J A White	Clem Energy, LLC	Price Fm & equivs	Gas	1410	ACTIVE	39.083465	-80.546827
10	4704100559	Lewis	Florence Wagner et al	Deran Resources, Inc.	Conemaugh Group	Gas	685	ACTIVE	39.075044	-80.524939
11	4704100568	Lewis	Florence Waggoner	Deran Resources, Inc.	Price Fm & equivs	Gas	1623	ACTIVE	39.073670	-80.527386
12	4704100631	Lewis	C M Hall	UNKNOWN	Price Fm & equivs	Dry w/ Gas Show	1666	PLUGGED	39.063703	-80.523997
13	4704100655	Lewis	John White	Alliance Petroleum Co. LLC	Price Fm & equivs	Gas w/ Oil Show	1698	ABANDONED	39.085791	-80.540008
14	4704100687	Lewis	Sarah A Kemper	Consol Gas Co.	Big Injun (Gmbr)	Gas w/ Oil Show	1658	PLUGGED	39.080815	-80.540191
15	4704100732	Lewis	John W Kemper	UNKNOWN	Hampshire Grp	Gas	2370	NEVER DRILLED	39.091447	-80.522704
16	4704100762	Lewis	S A Hall	Clem Energy, LLC	Squaw	Gas w/ Oil Show	1507	ACTIVE	39.083184	-80.522572
17	4704100802	Lewis	Edward Carrell	Alliance Petroleum Co. LLC	Price Fm & equivs	Gas	1801	ACTIVE	39.085990	-80.535815
18	4704100913	Lewis	Israel Simmons	Dominion Energy Transmission, Inc.	Big Injun (Gmbr)	Gas	1577	ACTIVE	39.089277	-80.542014
19	4704101114	Lewis	Gerald R Wright	Diversified Production LLC	Price Fm & equivs	Gas	1684	ACTIVE	39.061943	80.515336
20	4704101126	Lewis	Bruce/J Carrell/M Bailey	Alliance Petroleum Co. LLC	Price Fm & equivs	Gas	1473	ACTIVE	39.090285	-80.533119
21	4704101282	Lewis	F White	Dominion Energy Transmission, Inc.	Undf PRICE blw NJN	Gas w/ Oil Show	1716	ACTIVE	39.096724	-80.531754
22	4704101375	Lewis	F White	Dominion Energy Transmission, Inc.	Undf PRICE blw NJN	Gas	1649	ACTIVE	39.102532	-80.531000
23	4704101381	Lewis	F White	Eastern Gas Transmission & Storage, Inc.	Price Fm & equivs	Gas	1533	ACTIVE	39.099706	-80.525513
24	4704101439	Lewis	Oddie Bailey et al	UNKNOWN	not available	not available	-	PLUGGED	39.079115	-80.521697
25	4704101446	Lewis	S & C Hall	Allegheny Land and Mineral Co.	Undf PRICE blw NJN	Dry w/ Oil Show	1661	PLUGGED	39.088695	-80.520315
26	4704101525	Lewis	Israel Simmons	Dominion Energy Transmission, Inc.	Big Injun (Gmbr)	Gas w/ Oil Show	1942	ACTIVE	39.096753	-80.539858
27	4704101527	Lewis	Edward E Garrett	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4718	ACTIVE	39.106969	-80.536030
28	4704101602	Lewis	F White	Dominion Energy Transmission, Inc.	Benson	Gas	4414	ACTIVE	39.101644	-80.543897
29	4704101603	Lewis	J Kent Burnside	Eastern Gas Transmission & Storage, Inc.	Greenland Gap Fm	Gas	4670	ACTIVE	39.112060	-80.532288
30	4704101641	Lewis	F White	Dominion Energy Transmission, Inc.	Benson	Gas	4703	ACTIVE	39.115940	-80.543809
31	4704101657	Lewis	Helen H Garrell	Eastern Gas Transmission & Storage, Inc.	Greenland Gap Fm	Gas	4450	ACTIVE	39.094622	-80.546304
32	4704101658	Lewis	James S Hall	Eastern Gas Transmission & Storage, Inc.	Greenland Gap Fm	Gas	4532	ACTIVE	39.102559	-80.526798
33	4704101664	Lewis	T T Taylor	Eastern Gas Transmission & Storage, Inc.	Brallier	Gas	4571	ACTIVE	39.108066	-80.544783
34	4704101676	Lewis	Bruce Garrett	Eastern Gas Transmission & Storage, Inc.	Greenland Gap Fm	Gas	4600	ACTIVE	39.103695	-80.553642
35	4704101692	Lewis	S A & C M Hall	Diversified Production LLC	Benson	Gas	4475	ACTIVE	39.087211	-80.524793
36	4704101694	Lewis	Clark White	Alliance Petroleum Co. LLC	Benson	Gas	4455	ACTIVE	39.099133	-80.535363

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37	4704101698	Lewis	John A White	UNKNOWN	Benson	Dry	4450	PLUGGED	39.084633	-80.542210
38	4704101709	Lewis	James H Hall	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4345	ACTIVE	39.094637	-80.526492
39	4704101739	Lewis	Gerald Hull	Eastern Gas Transmission & Storage, Inc.	Benson	Gas	4176	ACTIVE	39.087655	-80.544982
40	4704101744	Lewis	Israel Simmons	Dominion Energy Transmission, Inc.	Misc Sands-BNSW/BRLR	Gas	4375	ACTIVE	39.089765	-80.537573
41	4704101761	Lewis	William Burnside	Eastern Gas Transmission & Storage, Inc.	Benson	Gas	4760	ACTIVE	39.114433	-80.558559
42	4704101774	Lewis	E W & R M Waggoner	Eastern Gas Transmission & Storage, Inc.	Benson	Gas	4765	ACTIVE	39.109259	-80.553177
43	4704101821	Lewis	R H Hall	Greylock Conventional, LLC	Benson	Gas	4541	ACTIVE	39.072365	-80.516863
44	4704101845	Lewis	J A Kemper	Alliance Petroleum Co. LLC	Big Injun (Grnbr)	Gas	2062	ACTIVE	39.087540	-80.528065
45	4704101851	Lewis	T T Taylor	Dominion Energy Transmission, Inc.	Up Devonian	Gas	2548	ACTIVE	39.107144	-80.542702
46	4704101853	Lewis	M L Butcher	UNKNOWN	not available	not available	-	NEVER DRILLED	39.065298	-80.538880
47	4704101864	Lewis	Albert Woofler	Mountain V, LLC	Helderberg	Gas w/ Oil Show	7045	ACTIVE	39.082958	-80.554527
48	4704101866	Lewis	F M McKinley	Clem Energy, LLC	Helderberg	Gas	7325	ACTIVE	39.078844	-80.516421
49	4704101871	Lewis	M L Butcher	Mountain V, LLC	Helderberg	Gas	7104	ACTIVE	39.065841	-80.539537
50	4704101889	Lewis	S A & C M Hall	Mountain V, LLC	Helderberg	Gas w/ Oil Show	7140	ACTIVE	39.088230	-80.519941
51	4704101899	Lewis	Charles Kemper	Clem Energy, LLC	Benson	Gas	4443	ACTIVE	39.091320	-80.523335
52	4704101901	Lewis	Alfred Woofler	Alliance Petroleum Co. LLC	Big Injun (Grnbr)	Gas	1650	ACTIVE	39.081599	-80.534810
53	4704101907	Lewis	Harvey Hall	Eastern Gas Transmission & Storage, Inc.	Helderberg	Gas w/ Oil Show	7206	PLUGGED	39.063990	-80.529565
54	4704102050	Lewis	Israel Simmons	Alliance Petroleum Co. LLC	Benson	Gas	4775	ACTIVE	39.096272	-80.539878
55	4704102054	Lewis	Israel Simmons	Diversified Production LLC	Benson	Gas	4670	ABANDONED	39.099940	-80.549132
56	4704102077	Lewis	A T Simmons	Ross & Wharton Gas Co., Inc.	Benson	Gas	4324	ACTIVE	39.086449	-80.530455
57	4704102132	Lewis	A C Simmons	Mike Ross, Inc.	Bayard	Gas	2575	ACTIVE	39.096272	-80.547464
58	4704102148	Lewis	J B Snyder	Alliance Petroleum Co. LLC	Benson	Gas	4420	ACTIVE	39.094083	-80.532822
59	4704102184	Lewis	M C Burnside	Dominion Energy Transmission, Inc.	Benson	Gas	4848	ACTIVE	39.116787	-80.536540
60	4704102302	Lewis	M Halterman	Eastern Gas Transmission & Storage, Inc.	Hampshire Grp	Gas	2420	ACTIVE	39.109733	-80.556808
61	4704102303	Lewis	Orpha D Waggoner	Dominion Energy Transmission, Inc.	Benson	Oil and Gas	4777	ACTIVE	39.115272	-80.549369
62	4704102308	Lewis	F Riley	Eastern Gas Transmission & Storage, Inc.	Gordon	Gas	2393	ACTIVE	39.119733	-80.543167
63	4704102312	Lewis	C White	Alliance Petroleum Co. LLC	not available	not available	-	ACTIVE	39.101284	-80.534893
64	4704102317	Lewis	C Flesher	Alliance Petroleum Co. LLC	Hampshire Grp	Gas	2243	ACTIVE	39.067267	-80.529123
65	4704102318	Lewis	C Flesher	Diversified Production LLC	Hampshire Grp	Gas	2261	ACTIVE	39.062863	-80.529881
66	4704102340	Lewis	I Simmons	Eastern Gas Transmission & Storage, Inc.	not available	Gas	-	ACTIVE	39.087382	-80.549064
67	4704102342	Lewis	W Waggy	Diversified Production LLC	not available	not available	-	ACTIVE	39.055002	-80.525668
68	4704102348	Lewis	A Woofler	Alliance Petroleum Co. LLC	not available	not available	-	ACTIVE	39.076895	-80.530846
69	4704102349	Lewis	A Woofler	Alliance Petroleum Co. LLC	not available	not available	-	ACTIVE	39.080604	-80.529038
70	4704102352	Lewis	E Hall	Diversified Production LLC	not available	not available	-	ABANDONED	39.088272	-80.528906
71	4704102355	Lewis	C Robinson	Alliance Petroleum Co. LLC	not available	not available	-	ACTIVE	39.089927	-80.528642
72	4704102363	Lewis	M Losh	Alliance Petroleum Co. LLC	not available	not available	-	ACTIVE	39.067651	-80.522328
73	4704102367	Lewis	T T Taylor	Dominion Energy Transmission, Inc.	Gordon	Gas	2322	ACTIVE	39.109935	-80.546012
74	4704102375	Lewis	J Bailey	Alliance Petroleum Co. LLC	Hampshire Grp	Gas	2434	ACTIVE	39.072712	-80.532273
75	4704102486	Lewis	Helen Garfield	Dominion Energy Transmission, Inc.	Balltown	Gas	3535	ACTIVE	39.093256	-80.542467
76	4704102532	Lewis	M Fullnear	Alliance Petroleum Co. LLC	Benson	Gas	4496	ACTIVE	39.081256	-80.524657

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77	4704102603	Lewis	W Burnside	Eastern Gas Transmission & Storage, Inc.	not available	Storage	-	ACTIVE	39.114018	-80.556711
78	4704102608	Lewis	G W Waggoner	Eastern Gas Transmission & Storage, Inc.	Hampshire Grp	Storage	2296	ACTIVE	39.117018	-80.554880
79	4704102702	Lewis	Israel Simmons	UNKNOW	Gantz	Gas	2265	ABANDONED	39.092674	-80.548089
80	4704102703	Lewis	M M Peterson	Diversified Production LLC	Big Injun (Grnbr)	Gas	1950	ACTIVE	39.056558	-80.516147
81	4704102714	Lewis	W J Bailey	Diversified Production LLC	Gordon	Gas	2305	ACTIVE	39.072570	-80.540695
82	4704102726	Lewis	E W Waggoner	Consolidated Gas Supply Corp.	Hampshire Grp	Gas	2435	PLUGGED	39.113036	-80.551358
83	4704102866	Lewis	Uriah Rexroad	Petroleum Service Partners, Inc.	Greenland Gap Fm	Oil and Gas	4648	ACTIVE	39.063878	-80.513079
84	4704103079	Lewis	M L Butcher	Red Gas Co.	not available	Gas	-	ACTIVE	39.063922	-80.536298
85	4704103100	Lewis	Marjorie Hyatt	Dominion Energy Transmission, Inc.	Big Injun (Grnbr)	Oil w/ Gas Show	2075	ACTIVE	39.116597	-80.549618
86	4704103173	Lewis	Orpha Waggoner	Consolidated Gas Supply Corp.	Big Injun (Grnbr)	Dry	2089	PLUGGED	39.117125	-80.546833
87	4704103406	Lewis	R Hall/D Fisher	Mountain V, LLC	Benson	Gas	4431	ACTIVE	39.085428	-80.541750
88	4704103422	Lewis	J Kent Burside	Dominion Energy Transmission, Inc.	Hampshire Grp	Oil and Gas	2930	ACTIVE	39.110813	-80.536431
89	4704103447	Lewis	Nellie B Rohr	Mineral Resource Management, LLC	Benson	Gas	4326	ACTIVE	39.077104	-80.535130
90	4704103454	Lewis	Fisher et al	Mountain V, LLC	Benson	Gas	4602	ACTIVE	39.081958	-80.544873
91	4704103545	Lewis	R & V Cunningham	American Energy Holdings, LLC	Brallier	Gas	5975	ABANDONED	39.073986	-80.525964
92	4704103673	Lewis	James M Sheared	Red Gas Company	Salt Sands (undiff)	Gas	605	ACTIVE	39.066161	-80.537114
93	4704103698	Lewis	Frances/A Marple	Alliance Petroleum Co. LLC	Brallier	Gas	6104	ACTIVE	39.064619	-80.525432
94	4704103704	Lewis	Frances /Allen Marple	Alliance Petroleum Co. LLC	Brallier	Gas	6225	ACTIVE	39.065008	-80.518789
95	4704103711	Lewis	John L Burnside	Eastern Gas Transmission & Storage, Inc.	Benson	Oil and Gas	4621	ACTIVE	39.107689	-80.529411
96	4704103738	Lewis	Johathon R Dodson	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	3444	ACTIVE	39.075411	-80.521187
97	4704103745	Lewis	Jonathon R Dodson	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	3626	ACTIVE	39.070988	-80.521548
98	4704103969	Lewis	Ronald L Cunningham et al	Diversified Resources, Inc.	Alexander	Gas	4912	ABANDONED	39.070294	-80.528681
99	4704104068	Lewis	Helen H Garrett	Everest Operating, LLC	Greenland Gap Fm	Gas	4605	ACTIVE	39.091674	-80.542559
100	4704104088	Lewis	Margaret Waggoner Hrs	Everest Operating, LLC	Greenland Gap Fm	Gas	4855	ACTIVE	39.110853	-80.538807
101	4704104097	Lewis	Carroll Gum	Everest Operating, LLC	Greenland Gap Fm	Gas	4426	ACTIVE	39.098206	-80.530123
102	4704104107	Lewis	Edward E Garrett	Everest Operating, LLC	Greenland Gap Fm	Gas	4625	ACTIVE	39.103087	-80.538609
103	4704104168	Lewis	Robert D Hall et al	Murvin & Meier Oil Co.	Greenland Gap Fm	Gas	4431	ACTIVE	39.084109	-80.521710
104	4704104181	Lewis	Robert Shearer	Ross & Wharton Gas Co., Inc.	Brallier	Gas	5775	ACTIVE	39.053841	-80.520274
105	4704104352	Lewis	Elmer C Cox	Diversified Production LLC	Greenland Gap Fm	Gas	2422	ACTIVE	39.060255	-80.532574
106	4704104353	Lewis	Patrick Boyle	Diversified Production LLC	Greenland Gap Fm	Gas	2636	ACTIVE	39.059497	-80.526600
107	4704104366	Lewis	Jay T Shearer	Red Gas Co.	Greenland Gap Fm	Gas	2510	ACTIVE	-80.536308	-1.000000
108	4704104368	Lewis	Jay T Shearer	Red Gas Co.	Price Fm & equivs	Gas	2013	ACTIVE	-80.539887	-1.000000
109	4704104370	Lewis	Jay T Shearer	Red Gas Co.	Price Fm & equivs	Gas	2157	ACTIVE	39.070084	-80.532743
110	4704104371	Lewis	Jay T Shearer	Red Gas Co.	Price Fm & equivs	Gas	2204	ACTIVE	39.066806	-80.532805
111	4704104391	Lewis	Johanan R Dodson	Diversified Production LLC	Greenland Gap Fm	Gas	3475	ACTIVE	39.071205	-80.512484
112	4704104396	Lewis	Kenneth H Heckler	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4604	ACTIVE	39.104854	-80.548657
113	4704104484	Lewis	Simeon A Hall/D-Hall hrs	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	3655	ACTIVE	39.068072	-80.525221
114	4704104486	Lewis	Jonathan R Dodson	Diversified Production LLC	Greenland Gap Fm	Gas	3568	ACTIVE	39.069314	-80.518032
115	4704104489	Lewis	Elmer Cox Est	Diversified Production LLC	Greenland Gap Fm	Gas	3595	ACTIVE	39.063584	-80.532636
116	4704104494	Lewis	J K Burnside/W Burnside	Eastern Gas Transmission & Storage, Inc.	Greenland Gap Fm	Gas	4906	ACTIVE	39.105763	-80.529710

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117	4704104495	Lewis	Kevin Mullooly	Diversified Production LLC	Greenland Gap Fm	Gas	3475	ACTIVE	39.059062	-80.513393
118	4704104496	Lewis	Joseph C Waggoner Sr	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4529	ACTIVE	39.112036	-80.544948
119	4704104498	Lewis	Patrick D Boyle	Diversified Production LLC	Greenland Gap Fm	Gas	3535	ACTIVE	39.057322	-80.522693
120	4704104526	Lewis	Melvin L Davis	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4718	ACTIVE	39.104278	-80.540345
121	4704104590	Lewis	Jay T Shearer	Red Gas Co.	Greenland Gap Fm	Gas	2651	ACTIVE	39.071884	-80.536584
122	4704104604	Lewis	Jay T Shearer	Red Gas Co.	Hampshire Grp	Gas	2015	ACTIVE	39.063569	-80.533182
123	4704104605	Lewis	Jay T Shearer	Red Gas Co.	Greenland Gap Fm	Gas	2560	ACTIVE	39.068874	-80.535996
124	4704104606	Lewis	Jay T Shearer	Red Gas Co.	Greenland Gap Fm	Gas	2440	ACTIVE	39.064041	-80.535779
125	4704104607	Lewis	John & Rita Lydon	Diversified Production LLC	Greenland Gap Fm	Gas	2760	ACTIVE	39.056004	-80.510851
126	4704104650	Lewis	Gerald R Wright	Diversified Production LLC	Greenland Gap Fm	Gas	3497	ACTIVE	39.060098	-80.518680
127	4704104659	Lewis	Robert B Burnside	Alliance Petroleum Co. LLC	Misc Sands-RILY/BNSN	Gas	3576	ACTIVE	39.078007	-80.528041
128	4704104669	Lewis	Dodson	Lone Pine Operating Co., Inc.	Greenland Gap Fm	Gas	3814	ACTIVE	39.061673	-80.508557
129	4704104755	Lewis	Helen Garrett et al	Dominion Exploration & Production	Greenland Gap Fm	Gas	2693	ACTIVE	39.078060	-80.541952
130	4704104759	Lewis	Robert B Burnside	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas w/ Oil Show	2665	ACTIVE	39.080960	-80.539075
131	4704104881	Lewis	Madeline Moody	Diversified Production LLC	Hampshire Grp	Gas	2803	ACTIVE	39.054566	-80.529016
132	4704104885	Lewis	Charles R Kemper	Alliance Petroleum Co. LLC	Misc Sands-RILY/BNSN	Gas	3440	ACTIVE	39.074161	-80.532587
133	4704104955	Lewis	Kenneth/S Fox	Horizon Energy Corp.	Greenland Gap Fm	Gas	3807	ACTIVE	39.061818	-80.524741
134	4704104956	Lewis	Violet I Wright	Horizon Energy Corp.	Misc Sands-RILY/BNSN	Gas	3465	ACTIVE	39.062891	-80.518252
135	4704105132	Lewis	Hal A Brown	Ross & Wharton Gas Co., Inc.	Greenland Gap Fm	Gas	5257	ACTIVE	39.091592	-80.527729
136	4704105154	Lewis	Dodson Farm LLC	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	3370	ACTIVE	39.071389	-80.516706
137	4704105164	Lewis	Richard Billanti	Dominion Energy Transmission, Inc.	Benson	Gas	4430	ACTIVE	39.092141	-80.528155
138	4704105166	Lewis	Robert B Burnside	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	2450	ACTIVE	39.078997	-80.531699
139	4704105185	Lewis	Gerald Hull	Eastern Gas Transmission & Storage, Inc.	Greenland Gap Fm	Gas	3440	ACTIVE	39.084491	-80.547275
140	4704105186	Lewis	Gerald Hull	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4520	ACTIVE	39.087632	-80.539191
141	4704105187	Lewis	Edward E Garrett	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	2690	ACTIVE	39.083963	-80.538115
142	4704105188	Lewis	Edward E Garrett	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	2450	ACTIVE	39.082051	-80.530995
143	4704105228	Lewis	Paul J Heater Jr	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4490	ACTIVE	39.094107	-80.537552
144	4704105278	Lewis	Ronald Lee Cunningham Jr	Diversified Resources, Inc.	Greenland Gap Fm	Gas	3900	ACTIVE	39.071152	-80.532234
145	4704105458	Lewis	Michael R Morris	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	4538	ACTIVE	39.084647	-80.527630
146	4704105459	Lewis	Clifford B Messenger	Dominion Energy Transmission, Inc.	Benson	Gas	4561	ACTIVE	39.096861	-80.532349
147	4704105527	Lewis	Melvin L Davis	Alliance Petroleum Co. LLC	Misc Sands-BNSN/BRLR	Gas	4430	ACTIVE	39.099365	-80.539908
148	4704105544	Lewis	Melvin L Davis	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	3375	ACTIVE	39.098875	-80.543700
149	4704105586	Lewis	Nancy E Smith/R C Smith Jr	Diversified Production LLC	Harrell Sh	Gas	5894	ACTIVE	39.062354	-80.528819
150	4704105587	Lewis	Nancy E & Ronald C Jr Smith	Diversified Production LLC	Harrell Sh	Gas	6125	ACTIVE	39.068525	-80.530749
151	4704105600	Lewis	Michael Meixner	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	3542	ACTIVE	39.076892	-80.523411
152	4704105601	Lewis	Michael Meixner	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	3640	ACTIVE	39.078825	-80.525202
153	4704105655	Lewis	Helen H Garrett	Eastern Gas Transmission & Storage, Inc.	Brallier	Gas	4747	ACTIVE	39.095193	-80.551189
154	4704130063	Lewis	Harvey & Blondine Hall	Reserve Gas Co.	Fifth	Gas	2135	PLUGGED	39.095952	-80.525746
155	4704130064	Lewis	J L J Bailey	Reserve Gas Co.	Hampshire Grp	Gas	2378	PLUGGED	39.074289	-80.535908
156	4704130089	Lewis	Mrs Ova Lester	Reserve Gas Co.	Hampshire Grp	Gas w/ Oil Show	2389	PLUGGED	39.105563	-80.547186

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157	4704130107	Lewis	S A Hall	Reserve Gas Co.	Hampshire Grp	Gas	2255	PLUGGED	39.088256	-80.524192
158	4704130108	Lewis	James Burnside	Reserve Gas Co.	Hampshire Grp	Gas	2440	PLUGGED	39.107544	-80.529783
159	4704130153	Lewis	Joseph Losh	Reserve Gas Co.	not available	not available	-	PLUGGED	39.064718	-80.520835
160	4704130161	Lewis	D B Bailey	Reserve Gas Co.	Hampshire Grp	Gas	2325	PLUGGED	39.072881	-80.540558
161	4704130163	Lewis	Nell Rohr	Reserve Gas Co.	Hampshire Grp	Gas	2133	PLUGGED	39.077716	-80.534049
162	4704130170	Lewis	M L Butcher	Reserve Gas Co.	Hampshire Grp	Gas	2304	PLUGGED	39.068977	-80.537022
163	4704130171	Lewis	Israel Simmons	Reserve Gas Co.	Hampshire Grp	Gas	2183	PLUGGED	39.089306	-80.540232
164	4704130221	Lewis	Israel Simmons	Hope Natural Gas Company	Hampshire Grp	Oil and Gas	2449	PLUGGED	39.095217	-80.540013
165	4704130251	Lewis	F White	Hope Natural Gas Company	Hampshire Grp	Oil and Gas	2362	PLUGGED	39.100628	-80.543925
166	4704130298	Lewis	Hannah Kemper	Hope Natural Gas Company	Hampshire Grp	Gas	2186	PLUGGED	39.088981	-80.526611
167	4704130319	Lewis	E W & R M Waggoner	Hope Natural Gas Company	Hampshire Grp	Gas	2443	PLUGGED	39.110702	-80.549391
168	4704130357	Lewis	Mary C Burnside	Hope Natural Gas Company	not available	not available	-	PLUGGED	39.116825	-80.535930
169	4704130523	Lewis	J T Lovett	Hope Natural Gas Company	Hampshire Grp	Oil and Gas	2244	PLUGGED	39.088876	-80.526763
170	4704130528	Lewis	Cora B Bailey	Hope Natural Gas Company	Hampshire Grp	Gas	2409	PLUGGED	39.077107	-80.542004
171	4704130529	Lewis	James R Bailey	Hope Natural Gas Company	Hampshire Grp	Gas w/ Oil Show	2250	PLUGGED	39.074144	-80.524931
172	4704130572	Lewis	Israel Simmons	Hope Natural Gas Company	Hampshire Grp	Gas w/ Oil Show	2397	PLUGGED	39.098598	-80.551368
173	4704130573	Lewis	Fortunatus White	Hope Natural Gas Company	Hampshire Grp	Gas w/ Oil Show	2611	PLUGGED	39.113567	-80.546105
174	4704130578	Lewis	Fortunatus White	Hope Natural Gas Company	Hampshire Grp	Gas	2602	PLUGGED	39.117115	-80.543159
175	4704130581	Lewis	Alfred Woofler	Hope Natural Gas Company	Hampshire Grp	Gas w/ Oil Show	2242	PLUGGED	39.079365	-80.533678
176	4704130586	Lewis	Sarah A Kemper	Hope Natural Gas Company	Hampshire Grp	Gas	2241	PLUGGED	39.077727	-80.535725
177	4704130592	Lewis	White Hall	Hope Natural Gas Company	Fifth	Gas	2250	PLUGGED	39.087966	-80.528286
178	4704130628	Lewis	Fortunatus White	Hope Natural Gas Company	not available	not available	2702	UNKNOWN	39.113287	-80.539976
179	4704130659	Lewis	G L White	Hope Natural Gas Company	Hampshire Grp	Gas	2399	PLUGGED	39.079108	-80.544659
180	4704130679	Lewis	Pleasant Alford	Hope Natural Gas Company	Hampshire Grp	Gas	2534	PLUGGED	39.061237	-80.524182
181	4704130720	Lewis	M L Butcher	Hope Natural Gas Company	Hampshire Grp	Oil and Gas	2206	PLUGGED	39.062687	-80.535716
182	4704130773	Lewis	Clark White	Consolidated Gas Supply Corp.	Hampshire Grp	Gas	2346	UNKNOWN	39.091347	-80.527729
183	4704130777	Lewis	Jas McKinley Hrs	Consolidated Gas Supply Corp.	not available	not available	-	PLUGGED	39.077625	-80.518979

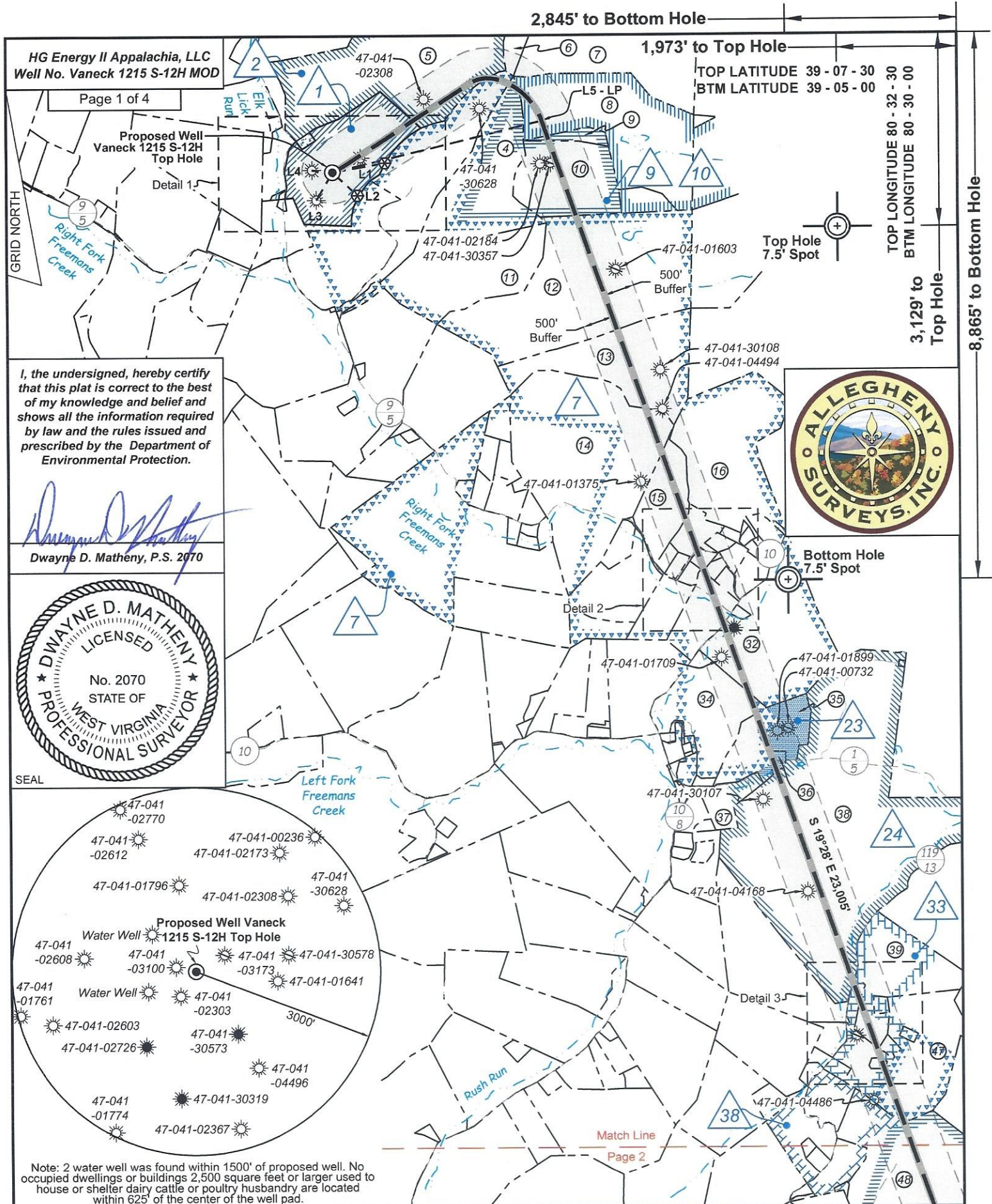
SOURCE: WVGES DATASET (2020) and WVEEP WEBSITE AND FIELD SURVEYS

UPDATED 3/10/23

YELLOW DENOTES WELL WITH TVD > 4,500'

DENOTES SURVEYED WELL COORDINATES

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WV Department of
Environmental Protection



HG Energy II Appalachia, LLC
Well No. Vaneck 1215 S-12H MOD

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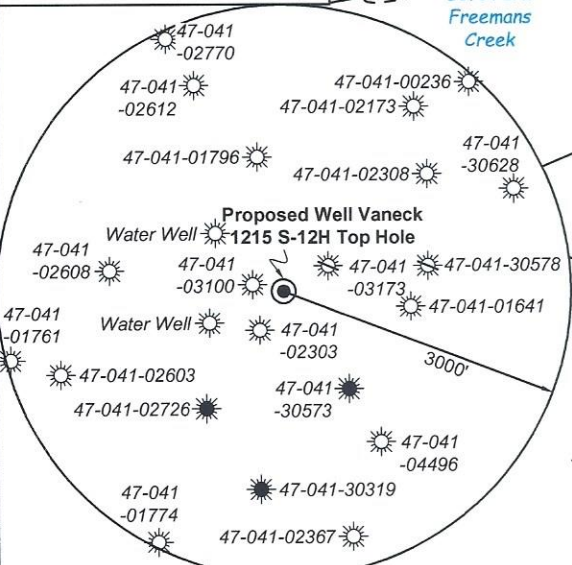
Proposed Well
Vaneck 1215 S-12H
Top Hole
Detail 1

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



SEAL



Note: 2 water well was 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.

2,845' to Bottom Hole

1,973' to Top Hole

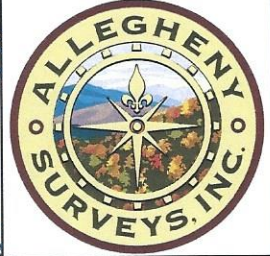
TOP LATITUDE 39 - 07 - 30
BTM LATITUDE 39 - 05 - 00

TOP LONGITUDE 80 - 32 - 30
BTM LONGITUDE 80 - 30 - 00

3,129' to Top Hole

8,865' to Bottom Hole

Top Hole
7.5' Spot



Bottom Hole
7.5' Spot

Match Line
Page 2

FILE NO: 156-36-UFC-20
DRAWING NO: Vaneck 1215 S-12H 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: February 9 2023
OPERATOR'S WELL NO. Vaneck 1215 S-12H
API WELL NO
47 - 041 - 05738
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1254.8' WATERSHED: Middle West Fork Creek QUADRANGLE: Camden
DISTRICT: Freemans Creek COUNTY: Lewis
SURFACE OWNER: HG Energy II, Appalachia, LLC, et al ACREAGE: 55.00
ROYALTY OWNER: George W. Waggoner, et ux, et al LEASE NO: ACREAGE: 56.00

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BH-MOD 7,040' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 32,080' MD

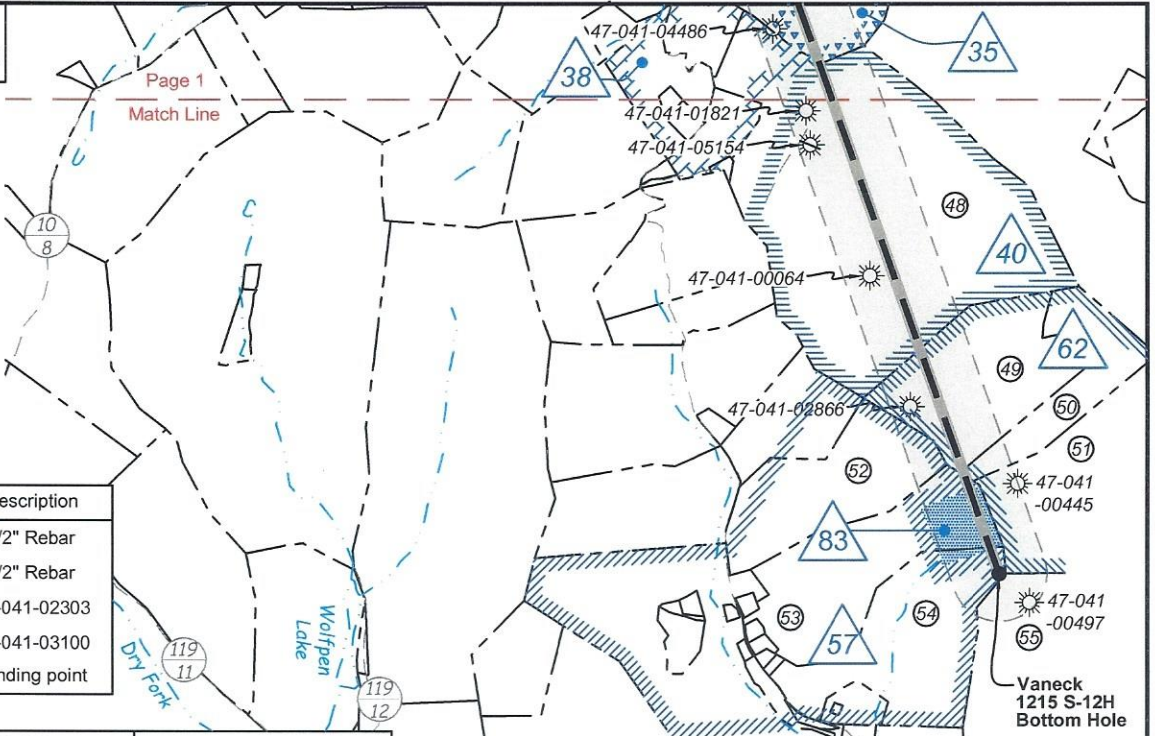
WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White
ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101 Parkersburg, WV 26101

05/05/2023



Page 1
Match Line

Tag	Bearing	Dist.	Description
L1	S 80°02' W	865.0'	1/2" Rebar
L2	N 47°12' W	551.5'	1/2" Rebar
L3	N 30°18' E	518.1'	47-041-02303
L4	S 84°05' E	335.9'	47-041-03100
L5	N 76°21' E	3,502.0'	Landing point

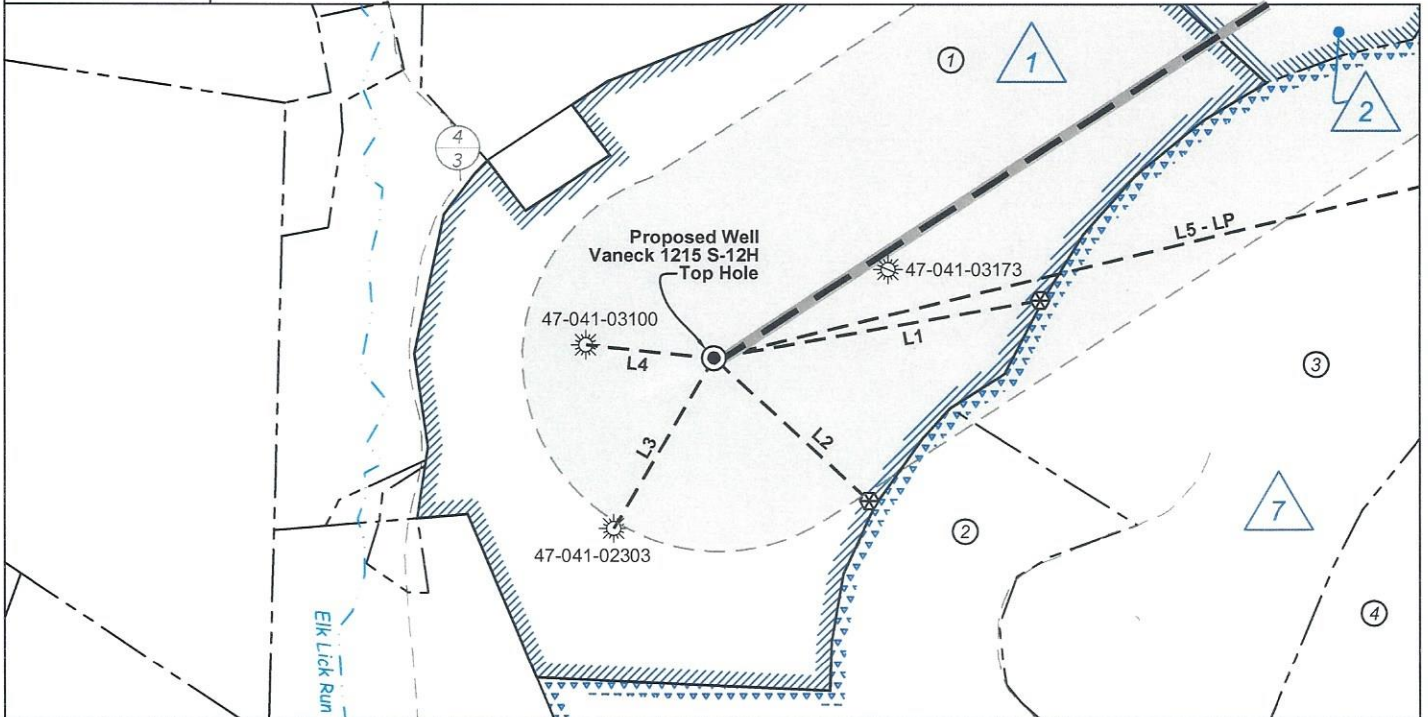


Vaneck 1215 S-12H Bottom Hole

Notes: Well No. Vaneck 1215 S-12H
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Top Hole coordinates Bottom Hole coordinates
Latitude: 39°06'59.06" Latitude: 39°03'32.35"
Longitude: 80°32'55.04" Longitude: 80°30'36.08"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,329,801.647m N: 4,323,446.902m
E: 539,037.232m E: 542,408.891m
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. Vaneck 1215 S-12H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,205,357.57'
E: 1,768,491.32'
Landing Point Coordinates
N: 14,206,184.31'
E: 1,771,894.34'
Bottom Hole Coordinates
N: 14,184,508.71'
E: 1,779,553.17'

Detail 1 (1"=500')



FILE NO: 156-36-UFC-20
DRAWING NO: Vaneck 1215 S-12H 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: February 9 2023
OPERATOR'S WELL NO. Vaneck 1215 S-12H
API WELL NO
47 - 041 - 05738
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1254.8' WATERSHED: Middle West Fork Creek

DISTRICT: Freemans Creek

SURFACE OWNER: HG Energy II, Appalachia, LLC, et al

ROYALTY OWNER: George W. Waggoner, et ux, et al

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BH-MOD

PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 32,080' MD

QUADRANGLE: Camden
COUNTY: Lewis
ACREAGE: 55.00

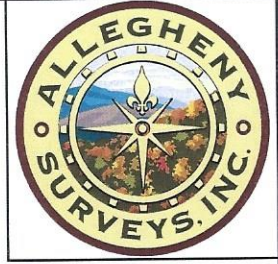
05/05/2023

WELL OPERATOR: HG Energy II Appalachia, LLC

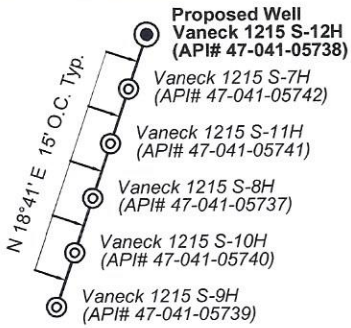
ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101

DESIGNATED AGENT: Diane C. White

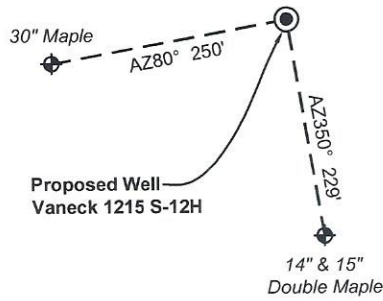
ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101



Wellhead Layout (NTS)



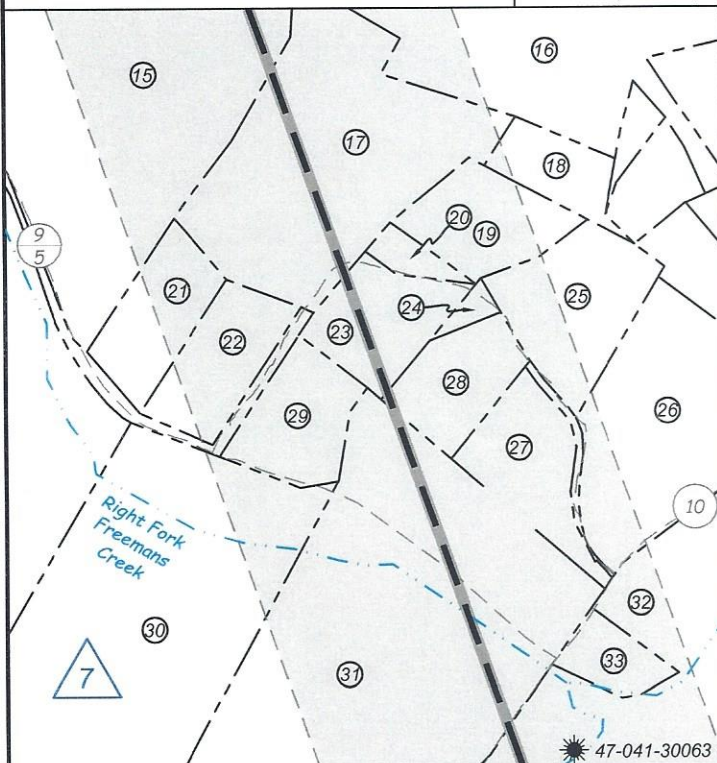
Well Location References (NTS)



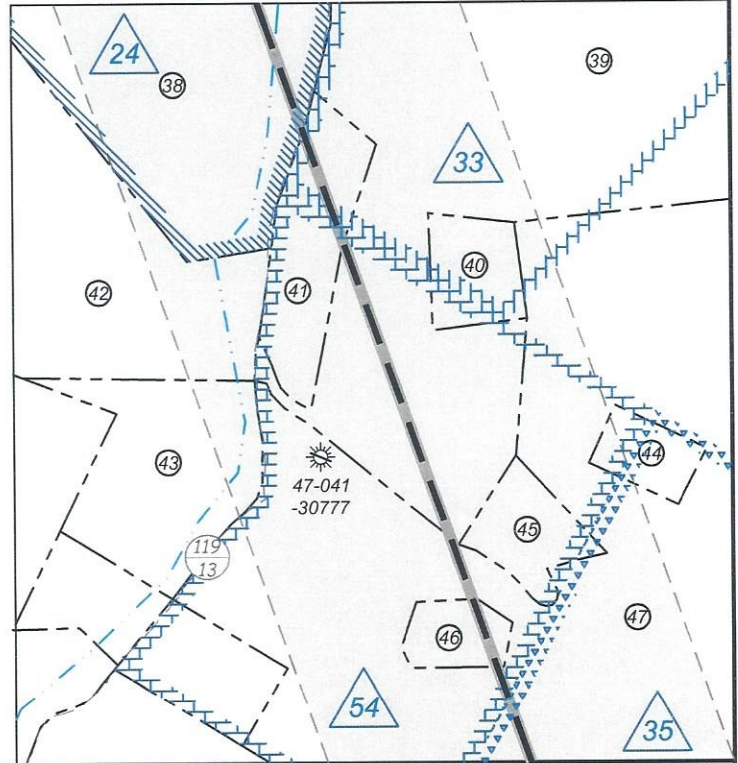
Legend

- 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.)
- Adjoinder surface tracts (approx.)

Detail 2 (1"=500')



Detail 3 (1"=500')



FILE NO: 156-36-UFC-20
DRAWING NO: Vaneck 1215 S-12H 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: February 9 2023
OPERATOR'S WELL NO. Vaneck 1215 S-12H
API WELL NO
47 - 041 - 05738
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1254.8' WATERSHED: Middle West Fork Creek
DISTRICT: Freemans Creek

QUADRANGLE: Camden
COUNTY: Lewis
ACREAGE: 55.00

SURFACE OWNER: HG Energy II, Appalachia, LLC, et al
ROYALTY OWNER: George W. Waggoner, et ux, et al

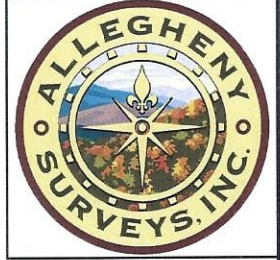
LEASE NO: _____ ACREAGE: 56.00

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BH-MOD 7,040' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 32,080' MD

WELL OPERATOR: HG Energy II Appalachia, LLC
ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101

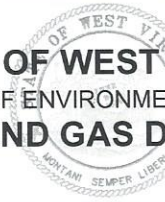
DESIGNATED AGENT: Diane C. White
ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101

05/05/2023



Lewis Co. - Freeman Creek Dist.				
No.	TM / Par	Owner	Bk / Pg	Ac.
1	5C / 29	H.G. Energy II Appalachia, LLC	765 / 894	55.00
2	5C / 25	Raymond C. & Colona J. Waggoner	567 / 416	45.48
3	5C / 27.2	Jack E. & Cerilda M. Waggoner	547 / 691	57.97
4	5C / 22	Linda Lou Waggoner	W33 / 157	57.76
5	5C / 30	Woody Lumber Co. Inc.	590 / 438	140.50
6	5C / 31	Nancy Hayhurst, et al	F30 / 392	13.75
7	5C / 32	Robert S. Glofelty	339 / 241	94.40
8	5C / 37	Phillip E. Burnside	766 / 831	83.75
9	5C / 38	Phillip E. Burnside	766 / 831	4.25
10	5C / 39	Phillip E. Burnside, et al	666 / 503	47.00
11	5C / 22.1	Janet L. & Joseph C. Waggoner, Sr.	705 / 183	57.53
12	5C / 45	Phillip E. Burnside, et al	666 / 503	121.42
13	5C / 46	John K. Burnside, et al	W1 / 393	60.00
14	5D / 35	Edward E. Garrett, et al	429 / 245	130.47
15	5D / 60.13	Richard B. & Erica S. Messenger	577 / 212	23.96
16	5D / 60	Dixie D. & William R. Fultineer, Sr.	627 / 496	82.66
17	5D / 60.3	Lori L. & Earl F. Hill, III	696 / 688	5.74
18	5D / 60.18	Edward Brightbill & Vicki A. Harper	750 / 120	1.23
19	5D / 60.12	Jeremy & Christina White	609 / 539	2.00
20	5D / 60.7	Jeremy & Christina White	609 / 539	0.43
21	5D / 60.1	Michael P. & Julie T. Lough	750 / 243	2.02
22	5D / 60.2	Sylvia McNeish	W22 / 297	2.02
23	5D / 60.4	Earl D. & Margaret A. Perrine	369 / 567	1.57
24	5D / 60.6	Earl D. & Margaret A. Perrine	400 / 192	0.23
25	5D / 60.15	Jeremy Bruffy	715 / 454	2.86
26	5D / 60.14	Jeremy Bruffy	715 / 454	5.86
27	5D / 60.11	Allen L. & Marsha H. Boggs	530 / 432	2.33
28	5D / 60.9	Lori L. & Earl F. Hill, III	727 / 700	1.81
29	5D / 60.5	Raymond D. Workman	717 / 475	1.69
30	5D / 37	Michael Lattea & Melissa Lattea	F32 / 55	13.86
31	5D / 38	Marsha Hall Boggs	W8 / 308	18.82
32	5D / 59	James H. Hall Trust	199 / 488	73.25
33	5D / 58	James H. Hall Trust	251 / 351	1.00
34	5D / 39	John M. & Diana L. Garrett	701 / 658	41.92
35	5D / 57	John T. Garrett, et al	728 / 296	28.70
36	5D / 57.1	John M. & Diana L. Garrett	722 / 674	1.71
37	5D / 54	Edward E. Garrett	W7 / 578	10.50
38	6D / 10	Alice J. Fisher, et al	583 / 439	252.44
39	6E / 1	Bruce S. Kimmel, et al	776 / 920	42.70
40	6E / 1.6	Xavier S. Grahm & Charles Carnagey	717 / 419	1.50
41	6E / 1.9	KAIA	721 / 683	2.99
42	5E / 43	KAIA	721 / 683	58.22
43	6E / 1.8	Patricia A. & Joel S. Harris	721 / 670	4.95
44	6E / 1.1	Dennis & Cecilia H. Hodges	557 / 490	1.00
45	6E / 1.3	Mark Odle	606 / 783	1.54
46	6E / 1.2	Clint R. Stenger	748 / 55	1.00
47	6E / 1.7	Patricia A. & Joel S. Harris	721 / 670	61.20
48	6E / 4	Sand Hill Land Ventures, LP	777 / 873	171.06
49	6E / 10	Sand Hill Land Ventures, LP	777 / 873	51.25
50	6E / 9	Heartwood Forestland Fund VII	666 / 124	28.75
51	6E / 8	Heartwood Forestland Fund VII	666 / 124	93.90
52	6E / 7	Gerald R. Wright	WB M / 333	50.67
53	6F / 1.2	Roger L. & Ladonna F. Sprouse	323 / 649	53.86
54	6F / 34	Kevin & Janet Mullooly	551 / 36	52.27
55	6F / 35	Roger D. Clem, Jr.	577 / 558	63.90

ID	Lease
1	George W. Waggoner, et ux
2	Fielding B. Riley, et al
7	F. White
9	J.A. Burnside, et ux
10	Blonda S. Hall, et ux, et al
23	Charles Alan Kemper
24	S.A. Hall, et ux, et al
33	Helen M. King, et al
35	Aldo McKinley
38	Simeon A. Hall, Jr., et ux
40	R.H. Hall, et ux
54	Grace Rohrbough, et al
57	M.M. Peterson, et ux
62	Cecil Rexroad, et ux, et al
83	H.G. Energy II Appalachia, LLC

FILE NO: 156-36-UFC-20	 <p>STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS DIVISION</p>	DATE: February 9 2023
DRAWING NO: Vaneck 1215 S-12H Well Plat		OPERATOR'S WELL NO. Vaneck 1215 S-12H
SCALE: 1" = 2000'		API WELL NO
MINIMUM DEGREE OF ACCURACY: Submeter		47 — 041 — 05738
PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV		STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1254.8' WATERSHED: Middle West Fork Creek QUADRANGLE: Camden
DISTRICT: Freemans Creek COUNTY: Lewis
SURFACE OWNER: HG Energy II, Appalachia, LLC, et al ACREAGE: 55.00
ROYALTY OWNER: George W. Waggoner, et ux, et al LEASE NO: ACREAGE: 56.00

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BH-MOD 7,040' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 32,080' 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

WW-6A1
(5/13)

Operator's Well No. Vaneck 1215 S-12H

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

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

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

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

**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

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Office of Oil and Gas

APR 24 2023

WV Department of
Environmental Protection

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

<p>7</p> <p>FK053097</p>	<p>03-005C-0023-0000 p/o 03-005C-0023-0000 03-005C-0022-0001 03-005C-0023-0000 p/o 03-005C-0023-0000 03-005C-0027-0000 03-005C-0027-0002 03-005C-0045-0000 03-005C-0046-0000 p/o 03-005D-0019-0000 03-005D-0020-0000 p/o 03-005D-0033-0000 03-005D-0036-0000 03-005D-0036-0001 p/o 03-005D-0036-0002 03-005D-0037-0000 p/o 03-005D-0038-0000 p/o 03-005D-0039-0000 03-005D-0039-0001 p/o 03-005D-0039-0003 p/o 03-005D-0040-0000 p/o 03-005D-0041-0000 p/o 03-005D-0045-0000 03-005D-0057-0000 03-005D-0059-0000 03-005D-0060-0000 03-005D-0060-0001 THRU 03-005D-0060-0018 03-005D-0061-0000 03-005D-0061-0001 03-005D-0062-0000</p>	<p>Q100333000</p>	<p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>F. WHITE</p> <p>T. N. BARNSDAL, SOUTHERN OIL COMPANY, AND FRED S. RICH</p> <p>RESERVE GAS COMPANY</p> <p>HOPE NATURAL GAS COMPANY</p> <p>CONSOLIDATED GAS SUPPLY CORPORATION</p> <p>CONSOLIDATED GAS TRANSMISSION CORPORATION</p> <p>CNG TRANSMISSION CORPORATION</p> <p>DOMINION TRANSMISSION, INC.</p> <p>CNX GAS COMPANY LLC</p> <p>NOBLE ENERGY, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>J. A. BURNSIDE AND ELLA BLANCHE BURNSIDE, HIS WIFE, EACH IN THEIR OWN RIGHT</p> <p>HOPE NATURAL GAS COMPANY</p> <p>CONSOLIDATED GAS SUPPLY CORPORATION</p> <p>CONSOLIDATED GAS TRANSMISSION CORPORATION</p> <p>CNG TRANSMISSION CORPORATION</p> <p>DOMINION TRANSMISSION, INC.</p> <p>CNX GAS COMPANY LLC</p> <p>DOMINION TRANSMISSION, INC.</p> <p>CNX GAS COMPANY LLC</p> <p>NOBLE ENERGY, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>BLONDA S. HALL AND LUCY S. HALL, HIS WIFE; JAMES H. HALL AND PATRICIA HALL, HIS WIFE; MABEL HALL, WIDOW; MARJORIE HALL COSBY AND ROBERT S. COSBY, JR., HER HUSBAND; ROBERTA HALL STEPHENS AND CHARLES H. STEPHENS, HER HUSBAND; MABEL JANE HALL GIBBS; AND, HERBERT F. GIBBS, JR., HER HUSBAND</p> <p>HOPE NATURAL GAS COMPANY</p> <p>CONSOLIDATED GAS SUPPLY CORPORATION</p> <p>CONSOLIDATED GAS TRANSMISSION CORPORATION</p> <p>CNG TRANSMISSION CORPORATION</p> <p>DOMINION TRANSMISSION, INC.</p> <p>CNX GAS COMPANY LLC</p> <p>NOBLE ENERGY, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>HOPE NATURAL GAS COMPANY</p> <p>RESERVE GAS COMPANY</p> <p>HOPE NATURAL GAS COMPANY</p> <p>CONSOLIDATED GAS SUPPLY CORPORATION</p> <p>CONSOLIDATED GAS TRANSMISSION CORPORATION</p> <p>CNG TRANSMISSION CORPORATION</p> <p>DOMINION TRANSMISSION, INC.</p> <p>CNX GAS COMPANY LLC</p> <p>NOBLE ENERGY, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>NOT LESS THAN 1/8</p> <p>CONFIRMATORY DEED</p> <p>ASSIGNMENT</p> <p>MERGER/NAME CHANGE</p> <p>MEMORANDUM OF FARMOUT AGREEMENT</p> <p>LIMITED PARTIAL ASSIGNMENT (50%)</p> <p>PARTIAL ASSIGNMENT (32%)</p> <p>ASSIGNMENT</p> <p>ASSIGNMENT</p> <p>MERGER/NAME CHANGE</p>
<p>9</p> <p>FK061775</p>	<p>03-005C-0038-0000 03-005C-0039-0000 p/o 03-005C-0022-0000</p>	<p>Q100785000</p> <p>HG ENERGY II APPALACHIA, LLC</p> <p>HG ENERGY II APPALACHIA, LLC</p> <p>HG ENERGY II APPALACHIA, LLC</p> <p>HG ENERGY II APPALACHIA, LLC</p> <p>ASSIGNMENT (68%)</p> <p>NOT LESS THAN 1/8</p> <p>CONFIRMATORY DEED</p> <p>ASSIGNMENT</p> <p>MERGER/NAME CHANGE</p> <p>MEMORANDUM OF FARMOUT AGREEMENT</p> <p>LIMITED PARTIAL ASSIGNMENT (32%)</p> <p>ASSIGNMENT</p> <p>MERGER/NAME CHANGE</p> <p>SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT</p> <p>THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT</p> <p>ASSIGNMENT (68%)</p> <p>ASSIGNMENT</p> <p>CONFIRMATORY DEED</p> <p>ASSIGNMENT</p> <p>MERGER/NAME CHANGE</p> <p>MEMORANDUM OF FARMOUT AGREEMENT</p> <p>LIMITED PARTIAL ASSIGNMENT (50%)</p> <p>PARTIAL ASSIGNMENT (32%)</p> <p>ASSIGNMENT</p> <p>ASSIGNMENT</p> <p>MERGER/NAME CHANGE</p>	
<p>10</p> <p>FK064784</p>	<p>03-005C-0037-0000 03-005C-0040-0000 03-005C-0041-0000</p>	<p>Q101057000</p> <p>HG ENERGY II APPALACHIA, LLC</p> <p>HG ENERGY II APPALACHIA, LLC</p> <p>HG ENERGY II APPALACHIA, LLC</p> <p>DOMINION ENERGY TRANSMISSION, INC.</p> <p>ASSIGNMENT (68%)</p> <p>NOT LESS THAN 1/8</p> <p>CONFIRMATORY DEED</p> <p>ASSIGNMENT</p> <p>MERGER/NAME CHANGE</p> <p>MEMORANDUM OF FARMOUT AGREEMENT</p> <p>LIMITED PARTIAL ASSIGNMENT (50%)</p> <p>PARTIAL ASSIGNMENT (32%)</p> <p>ASSIGNMENT</p> <p>ASSIGNMENT</p> <p>MERGER/NAME CHANGE</p>	

05/05/2023

05/05/2023

23	Tract 23 03-005D-0057-0000 03-005D-0057-0001			DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. Charles Alan Kemper AKA Alan Kemper Connie Jane Scott FKA Connie Jane Lang FKA Connie Kemper William Kenneth Weaver - POA Stella Weaver Patricia J. Fenton Shirley V. Downs Sharon V. Dunham Mary Kimberly Hutson FKA Mary K. Schwartz Patricia Priolete Johnson FKA Patricia Kay Johnson Natalie Johnson Charles FKA Natalie Paige Johnson Norman Grant Johnson AKA Grant Johnson Michael London Priolete, II	HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT ASSIGNMENT (68%) NOT LESS THAN 1/8 NOT LESS THAN 1/8 NOT LESS THAN 1/8 NOT LESS THAN 1/8 NOT LESS THAN 1/8 NOT LESS THAN 1/8 NOT LESS THAN 1/8 NOT LESS THAN 1/8 NOT LESS THAN 1/8	723 734 736 780 780 778 778 778 778 778 778 778	499 558 220 143 145 558 402 404 499 550 497 495 552 548
24	DAD41528 03-006D-0010-0000 03-005D-0068-0000 03-006D-0010-0002	DAD41528	S. A. HALL AND GEORGIA E. HALL, HIS WIFE, AND CLAUDE M. HALL AND NELLE HALL, HIS WIFE ALLEGHENY LAND AND MINERAL COMPANY ALLEGHENY LAND AND MINERAL COMPANY Alenco, Inc. UMC Petroleum Corporation Ashland Exploration Holdings, Inc. Eastern States Oil and Gas, Inc. Blazer Energy Corp. Equitable Production - Eastern States, Inc. Equitable Production Company EQT PRODUCTION COMPANY	ALLEGHENY LAND AND MINERAL COMPANY ALLEGHENY LAND AND MINERAL COMPANY Alenco, Inc. UMC Petroleum Corporation Ashland Exploration Holdings, Inc. Eastern States Oil and Gas, Inc. Blazer Energy Corp. Equitable Production - Eastern States, Inc. Equitable Production Company EQT Production Company HG ENERGY II APPALACHIA, LLC	NOT LESS THAN 1/8 CONFIRMATORY DEED MERGER/NAME CHANGE ASSIGNMENT ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MERGER/NAME CHANGE MERGER/NAME CHANGE MERGER/NAME CHANGE ASSIGNMENT	258 401 457 519 525 546 557 546 546 546 770	541 538 667 24 207 207 207 560	
33	03-006E-0001-0000 03-006E-0001-0006 03-006E-0001-0009		HELEN M. KING, WIDOW, ADA BAILEY, WIDOW, JULIA FAY CUNNINGHAM AND B.L. CUNNINGHAM, HER HUSBAND; GRACE ROHRBOUGH, WIDOW, PAUL MCKINLEY AND MADALINE V. MCKINLEY, HIS WIFE; RICHARD A. MCKINLEY, BY NELLIE P. MCKINLEY, HIS ATTORNEY IN FACT; NELLIE P. MCKINLEY WIFE OF RICHARD A. MCKINLEY, AND CLARA E. ROWAN, WIDOW	CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG DEVELOPMENT COMPANY CNG PRODUCING COMPANY DOMINION EXPLORATION & PRODUCTION INC. DOMINION APPALACHIAN DEVELOPMENT LLC DOMINION TRANSMISSION INC CONSOL ENERGY HOLDINGS LLC XVI CONSOL GAS COMPANY CNX GAS COMPANY LLC GRACE ROHRBOUGH, WIDOW; CLARA ROWAN, WIDOW; PAUL W. MCKINLEY AND MADALINE V. MCKINLEY, HIS WIFE; AND HELEN M. KING	NOT LESS THAN 1/8 ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MERGER/NAME CHANGE ASSIGNMENT	314 425 432 58 651 651 651 9 766	34 127 633 366 137 225 318 471 352	
54	03-006E-0001-0000 p/o 03-006E-0001-0001 03-006E-0001-0002 p/o 03-006E-0001-0003 03-006E-0001-0005 p/o 03-006E-0001-0006 p/o 03-006E-0001-0007 p/o 03-006E-0001-0009	WV Department of Environmental Protection APR 24 2023 RECEIVED Office of Oil and Gas	CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG DEVELOPMENT COMPANY CNG PRODUCING COMPANY DOMINION EXPLORATION & PRODUCTION INC CONSOL GAS COMPANY CNX GAS COMPANY LLC ALDO MCKINLEY	CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG DEVELOPMENT COMPANY CNG PRODUCING COMPANY DOMINION EXPLORATION & PRODUCTION INC. CONSOL GAS COMPANY CNX GAS COMPANY LLC SOUTHERN OIL COMPANY	NOT LESS THAN 1/8 ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MERGER/NAME CHANGE MERGER/NAME CHANGE ASSIGNMENT	322 425 432 58 58 766 40	133 127 633 366 366 352 46	

35	53105	p/o 03-006E-0001-0007	53105
38	DAD38009001-9015	03-006E-0002-0000 03-006E-0003-0000 p/o 03-006E 0003-0001 p/o 03-006E-0004-0000 03-005E-0035-0000 03-005E-00036-0000 03-005E-0037-0000	
62	53244	p/o 03-006E-0004-0000	CNX053244 AGREEMENT 131356900

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Office of Oil and Gas
APR 24 2023
WV Department of
Environmental Protection

T. N. BARNSDALL, THE SOUTHERN OIL COMPANY, FRED S. RICH, AND W. S. MORRIS	RESERVE GAS COMPANY	ASSIGNMENT	85	106
RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
CNG TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	WVSOS	
DOMINION TRANSMISSION INC	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS	318
CONSOL ENERGY HOLDINGS LLC XVI, DOMINION RESERVES INC, AND DOMINION EXPLORATION & PRODUCTION INC	CONSOL ENERGY HOLDINGS LLC XVI	ASSIGNMENT	651	318
CNX GAS COMPANY LLC	CNX GAS COMPANY LLC	MERGER/NAME CHANGE	9	471
NOBLE ENERGY, INC.	NOBLE ENERGY, INC.	ASSIGNMENT (50%)	659	521
NOBLE ENERGY, INC.	NOBLE ENERGY, INC.	ASSIGNMENT	717	1
CECIL REKROAD AND LUCIAR REKROAD, HIS WIFE, AND CLYDE J. LU RAY LAND INC	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
LU RAY LAND INC	LU RAY LAND INC	NOT LESS THAN 1/8	258	593
J. L. TRITTIPO AND N. G. CLARK	J. L. TRITTIPO AND N. G. CLARK	ASSIGNMENT	309	137
LU RAY LAND INC	LU RAY LAND INC	ASSIGNMENT	382	283
DORAN & ASSOCIATES INC	DORAN & ASSOCIATES INC	ASSIGNMENT	382	521
EDGAR N CLARK	CABOT OIL AND GAS CORPORATION	ASSIGNMENT	472	135
CABOT OIL AND GAS CORPORATION	LONE PINE OPERATING COMPANY INC	ASSIGNMENT OF HYDROCARBONS	558	249
ENERVEST APPALACHIA L. P.	ENERVEST APPALACHIA L. P.	ASSIGNMENT	621	590
ENERVEST APPALACHIA L. P.	CGAS PROPERTIES L. P.	ASSIGNMENT	621	590

05/05/2023

				LONE PINE OPERATING COMPANY INC CGAS PROPERTIES LP M.M. PETERSON AND MARCELLA PETERSON, HIS WIFE RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION CNG DEVELOPMENT COMPANY DOMINION TRANSMISSION, INC. DOMINION TRANSMISSION, INC. CONSOL ENERGY HOLDINGS LLC XVI CNX GAS COMPANY LLC NOBLE ENERGY, INC. NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA LLC THE RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG DEVELOPMENT COMPANY CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CONSOL ENERGY HOLDINGS LLC XVI CNX GAS COMPANY LLC NOBLE ENERGY, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC	HORIZONTAL UNIT ORDER HORIZONTAL UNIT ORDER NOT LESS THAN 1/8 CONFIRMATORY DEED CONFIRMATORY DEED ASSIGNMENT DEED MERGER/NAME CHANGE MERGER/NAME CHANGE MERGER/NAME CHANGE ASSIGNMENT MERGER/NAME CHANGE LIMITED PARTIAL ASSIGNMENT (50%) ASSIGNMENT ASSIGNMENT	Docket 313 Docket 313 58 155 294 425 438 51 9 651 WVSOS 659 717 722	Case 319 Case 319 460 202 89 127 379 795 628 318 521 1 170
83	CNXDV011658 FEE	CNXDV011658 FEE	NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	DEED	722	293	

05/05/2023

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Office of Oil and Gas
APR 24 2023
WV Department of
Environmental Protection



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

CK# 035444
5000^{coll}
Expedited
Mod

47 04 105738

April 17, 2022

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

RE: Vaneck 1215 S-12H Drill Permit Revision Request – (47-041-05738)
Freeman's Creek District, Lewis County
West Virginia

Dear Mr. Blevins -

Per our discussions, enclosed are revised forms (survey plat, mylar, WW-6B, casing schematic, AOR, WW-6A1) and a check for expedited service for the 1215 S-12H well work permit revision request. We ask the permit be modified as the lateral has been lengthened and the Intermediate Casing has been revised.

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

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WV Department of
Environmental Protection

05/05/2023