



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

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-8H
47-041-05737-00-00

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

James A. Martin
Chief

Operator's Well Number: VANECK 1215 S-8H
Farm Name: HG ENERGY II, APPALACHIA, LLC , ET AL
U.S. WELL NUMBER: 47-041-05737-00-00
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-8H 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: 28,993'

11) Proposed Horizontal Leg Length: 20,935'

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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4704105737

WW-6B
(04/15)

API NO. 47- _____
 OPERATOR WELL NO. Vaneck 1215 S-8H
 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	5950'	5950' ✓	40% Excess Tail, CTS
Production	5 1/2"	NEW	P-110 HP	23	28993'	28993' ✓	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: 2023.04.15 11:14:09 -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 = 1.15, tail yield 1.20
Tubing							
Liners							

PACKERS

Kind:				RECEIVED Office of Oil and Gas
Sizes:				APR 24 2023
Depths Set:				WV Department of Environmental Protection

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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 20,935' lateral length, 28,993' 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 - 115.6 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 Anti Foam / D202 - 0.15% BWOB Dispersant / D095 1.5 lb per BBL CamNET* - 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*
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.

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*** 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 / D073 - 0.75% BWOB Retarder / D47 - 0.02 gal / sack VBWOB Anti Foam / D202 - 0.15% BWOB
 Dispersant / D099 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 GasBLOC* / D013 - 0.3% BWOB Retarder / D47 - 0.02 gal / sack Anti Foam /
 D801 - 0.03 gal / sack Retarder - 0% Excess

1215 S-8H
 Marcellus Shale Horizontal
 Lewis County, WV



Ground Elevation	1254.8'	1215 S-8H SHL	14205314.94N 1768476.91E
Azm	160.539°	1215 S-8H LP	14204518.28N 1767179.56E
WELLBORE DIAGRAM		1215 S-8H BHL	14184792.13N 1774150.04E

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 Kittanning Coal Fresh Water Protection	0	214, 600, 961 905 1200	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
17.5"	13.3/8" 69# J-55 BTC	Little Lime Big Lime Injuri / Gaze (Storage) Intermediate 1	1694 1741 1818 / 2073 0	1714 1818 1904 / 2125 2250	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
12.25"	9.5/8" 40# N-80 BTC	Thiry Foot Gordon Stray / Gordon 5th Sand Bayard Speechley Benson Alexander / Elk Intermediate 2	2274 2320 / 2346 2590 2660 3287 4599 4930 / 5540 0	2286 2336 / 2446 2612 2675 3301 4615 5100 / 5600 MD: 5850' Ind: 23.080	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' from 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
8.75"	5-1/2" 23# P-110 HP CDC HTQ	Rhinestreet Castroque Middlesex West River Burkett Tully Limestone Hamilton Marcellus TMD / TVD (Production) Onondaga	6203 6444 6650 6734 6831 6864 6950 7015 28992 7088	6444 6650 6734 6831 6864 6950 7088 7040	AIR / 9.0ppg SOBM	Lead: 14.5 ppg POZ/PNE-1 + 0.3% bwoc R3 + 1% bwoc ECT + 0.75 gal/sk FP-13L + 0.3% bwoc MPA170 Tail: 14.8 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP-13L + 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/TVD 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
8.5" Lateral					11.5ppg-12.5ppg SOBM				

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LP @ 7040' TVD / 8057 MD
 8.5" Hole - Cemented Long String
 5-1/2" 23# P-110 HP CDC HTQ
 +/-20935' ft Lateral
 TD @ +/-7040' TVD +/-28992' MD
 X=CENTRALIZER

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 Woofler	Dominion Energy Transmission, Inc.	Helderberg	Gas	7325	PLUGGED	39.080378	-80.530425
2	4704100064	Lewis	R H Hall	Diversified Resources, Inc.	Fifth	Gas	2316	ACTIVE	39.067629	-80.514534
3	4704100089	Lewis	J L L Bailey	Diversified Production LLC	Helderberg	Gas	7022	ACTIVE	39.073320	-80.538664
4	4704100238	Lewis	G W Jordan	Dominion Energy Transmission, Inc.	Fifth	Gas	2471	PLUGGED	39.102380	-80.538855
5	4704100334	Lewis	Alice Burnside	Eastern Gas Transmission & Storage, Inc.	Hampshire Grp	Storage	2478	ACTIVE	39.114145	-80.559086
6	4704100445	Lewis	Uriah 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	LN Wilfong	Diversified Production LLC	Up Devonian	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 (Grnbr)	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 (Grnbr)	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.	Undr PRICE blw INJN	Gas w/ Oil Show	1716	ACTIVE	39.096724	-80.531754
22	4704101375	Lewis	F White	Dominion Energy Transmission, Inc.	Undr PRICE blw INJN	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	Odie Bailey et al	UNKNOWN	not available	not available	-	PLUGGED	39.079115	-80.521697
25	4704101446	Lewis	S & C Hall	Allegheny Land and Mineral Co.	Undr PRICE blw INJN	Dry w/ Oil Show	1661	PLUGGED	39.088695	-80.520315
26	4704101525	Lewis	Israel Simmons	Dominion Energy Transmission, Inc.	Big Injun (Grnbr)	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	39.094466	-80.526492
39	4704101739	Lewis	Gerald Hull	Eastern Gas Transmission & Storage, Inc.	Benson	Gas	4176	ACTIVE	39.087609	-80.544982
40	4704101744	Lewis	Israel Simmons	Dominion Energy Transmission, Inc.	Misc Sands-BNSN/BRLR	Gas	4375	ACTIVE	39.089782	-80.537573
41	4704101761	Lewis	William Burnside	Eastern Gas Transmission & Storage, Inc.	Benson	Gas	4760	ACTIVE	39.114405	-80.558559
42	4704101774	Lewis	E W & R M Waggoner	Eastern Gas Transmission & Storage, Inc.	Benson	Gas	4765	ACTIVE	39.109210	-80.553177
43	4704101821	Lewis	R H Hall	Greylock Conventional, LLC	Benson	Gas	4541	ACTIVE	39.072366	-80.516863
44	4704101845	Lewis	J A Kemper	Alliance Petroleum Co. LLC	Big Injun (Gmbr)	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 Woofter	Mountain V, LLC	Helderberg	Gas w/ Oil Show	7045	ACTIVE	39.082958	-80.534527
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 Woofter	Alliance Petroleum Co. LLC	Big Injun (Gmbr)	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 Woofter	Alliance Petroleum Co. LLC	not available	not available	-	ACTIVE	39.076895	-80.530846
69	4704102349	Lewis	A Woofter	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	39.109335	-80.546012
74	4704102375	Lewis	J Bailey	Alliance Petroleum Co. LLC	Hampshire Grp	Gas	2434	ACTIVE	39.072712	-80.532273
75	4704102486	Lewis	Helen Garrett	Dominion Energy Transmission, Inc.	Balltown	Gas	3535	ACTIVE	39.093256	-80.542467
76	4704102532	Lewis	M Fultinear	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	39.117078	-80.554880
79	4704102702	Lewis	Israel Simmons	UNKNOWN	Gantz	Gas	2265	ABANDONED	39.09266	-80.548089
80	4704102703	Lewis	M M Peterson	Diversified Production LLC	Big Injun (Grnbr)	Gas	1950	ACTIVE	39.056581	-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	ACTIVE	39.113080	-80.551358
83	4704102866	Lewis	Uriah Rexroad	Petroleum Service Partners, Inc.	Greenland Gap Fm	Oil and Gas	4648	ACTIVE	39.065878	-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 Shearad	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	Envervest Operating, LLC	Greenland Gap Fm	Gas	4605	ACTIVE	39.091674	-80.542559
100	4704104088	Lewis	Margaret Waggoner Hrs	Envervest Operating, LLC	Greenland Gap Fm	Gas	4855	ACTIVE	39.110853	-80.538807
101	4704104097	Lewis	Carroll Gum	Envervest Operating, LLC	Greenland Gap Fm	Gas	4426	ACTIVE	39.098206	-80.530123
102	4704104107	Lewis	Edward E Garrett	Envervest Operating, LLC	Greenland Gap Fm	Gas	4625	ACTIVE	39.109087	-80.533609
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	Johahan R Dodson	Diversified Production LLC	Greenland Gap Fm	Gas	3475	ACTIVE	39.071205	-80.512484
112	4704104396	Lewis	Kenneth H Heckert	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	-80.518092
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 Brunside	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	39.112089	-80.544948
119	4704104498	Lewis	Patrick D Boyle	Diversified Production LLC	Greenland Gap Fm	Gas	3535	ACTIVE	39.057329	-80.522693
120	4704104526	Lewis	Melvin L Davis	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4718	ACTIVE	39.104228	-80.540345
121	4704104590	Lewis	Jay T Shearer	Red Gas Co.	Greenland Gap Fm	Gas	2651	ACTIVE	39.071889	-80.556584
122	4704104604	Lewis	Jay T Shearer	Red Gas Co.	Hampshire Grp	Gas	2015	ACTIVE	39.063585	-80.533182
123	4704104605	Lewis	Jay T Shearer	Red Gas Co.	Greenland Gap Fm	Gas	2560	ACTIVE	39.085574	-80.555996
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	-80.558115
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/BRUR	Gas	4430	ACTIVE	39.099365	-80.539908
148	4704105544	Lewis	Melvin L Davis	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	3375	ACTIVE	39.096875	-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 Melkner	Alliance Petroleum Co. LLC	Greenland Gap Fm	Gas	3542	ACTIVE	39.076892	-80.523411
152	4704105601	Lewis	Michael Melkner	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 & Blondie 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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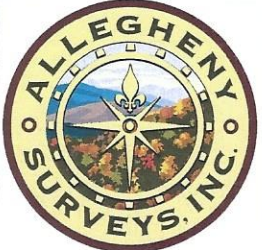
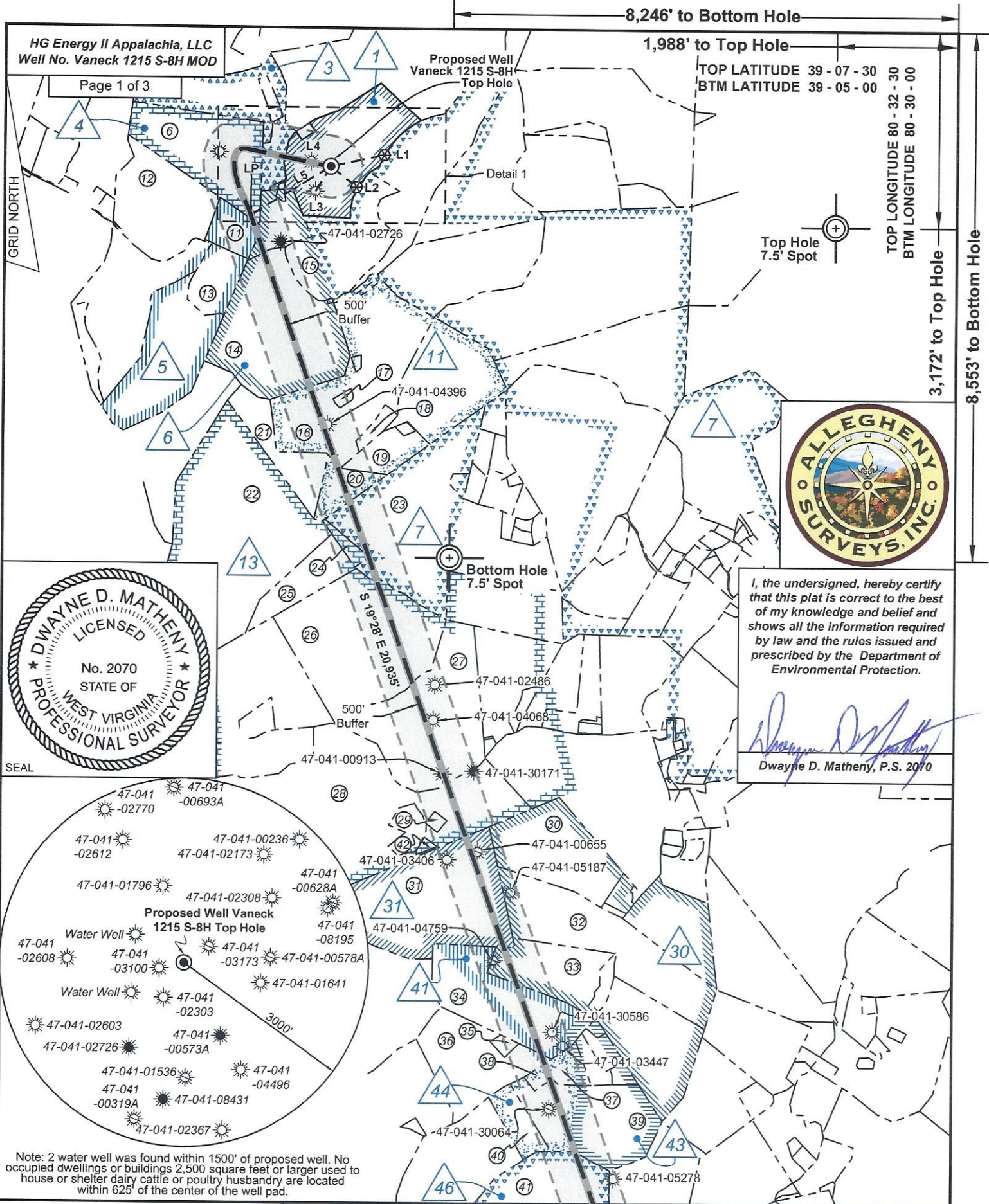
157	4704130107	Lewis	S A Hall	Reserve Gas Co.	Hampshire Grp	Gas	2265	PLUGGED	39.088256	-80.524192
158	4704130108	Lewis	James Burnside	Reserve Gas Co.	Hampshire Grp	Gas	2440	PLUGGED	39.107553	-80.529783
159	4704130153	Lewis	Joseph Losh	Reserve Gas Co.	not available	not available	-	PLUGGED	39.064709	-80.520835
160	4704130161	Lewis	D B Bailey	Reserve Gas Co.	Hampshire Grp	Gas	2325	PLUGGED	39.072839	-80.540558
161	4704130163	Lewis	Nell Rohr	Reserve Gas Co.	Hampshire Grp	Gas	2183	PLUGGED	39.077726	-80.534049
162	4704130170	Lewis	M L Butcher	Reserve Gas Co.	Hampshire Grp	Gas	2304	PLUGGED	39.068926	-80.537022
163	4704130171	Lewis	Israel Simmons	Reserve Gas Co.	Hampshire Grp	Gas	2183	PLUGGED	39.089396	-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	2611	PLUGGED	39.113567	-80.546105
174	4704130578	Lewis	Fortunatus White	Hope Natural Gas Company	Hampshire Grp	Gas w/ Oil Show	2602	PLUGGED	39.117115	-80.543159
175	4704130581	Lewis	Alfred Woofler	Hope Natural Gas Company	Hampshire Grp	Gas	2242	PLUGGED	39.079365	-80.533678
176	4704130586	Lewis	Sarah A Kemper	Hope Natural Gas Company	Hampshire Grp	Gas w/ Oil Show	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	39.119287	-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 WVDEP WEBSITE AND FIELD SURVEYS

UPDATED 3/10/23

YELLOW DENOTES WELL WITH TVD > 4,500' DENOTES SURVEYED WELL COORDINATES

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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

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.

FILE NO: 156-36-UFC-20
 DRAWING NO: Vaneck 1215 S-8H Well Plat
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: CORS, Bridgeport, WV

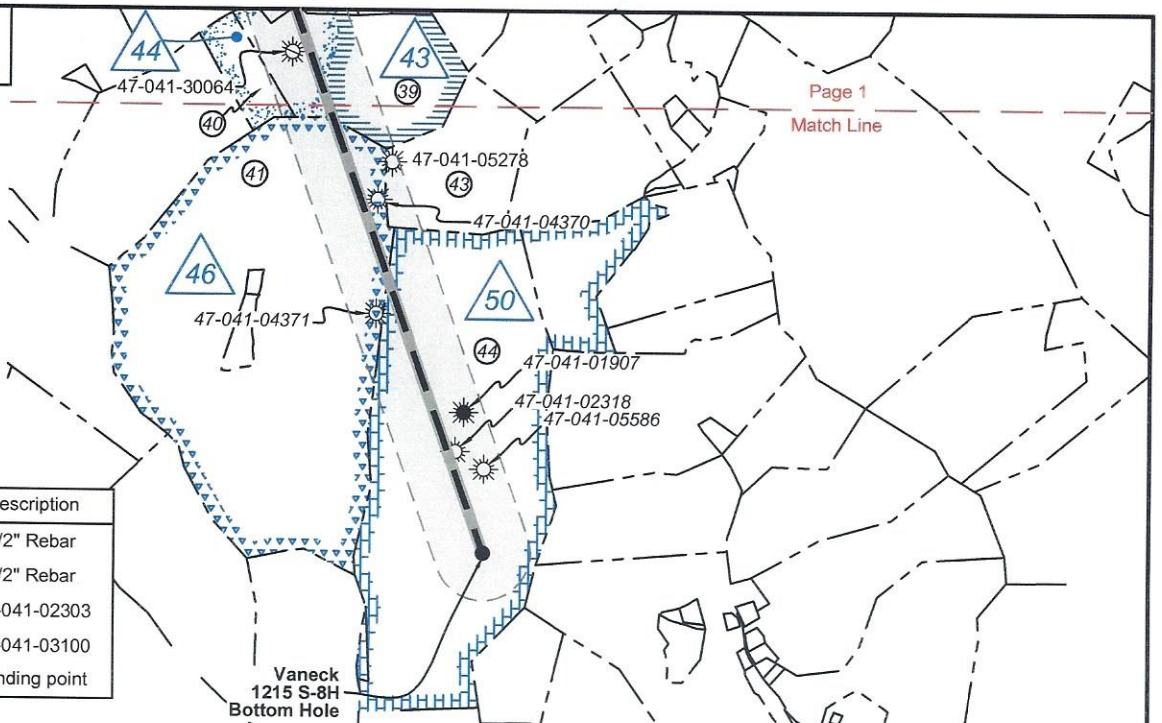
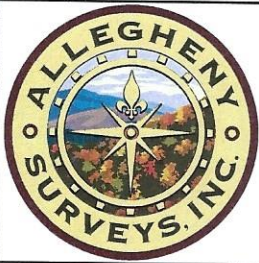
STATE OF WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: February 9 2023
 OPERATOR'S WELL NO. Vaneck 1215 S-8H
 API WELL NO
 47 - 041 - 05737
 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 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
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,040' TVD 28,993' MD

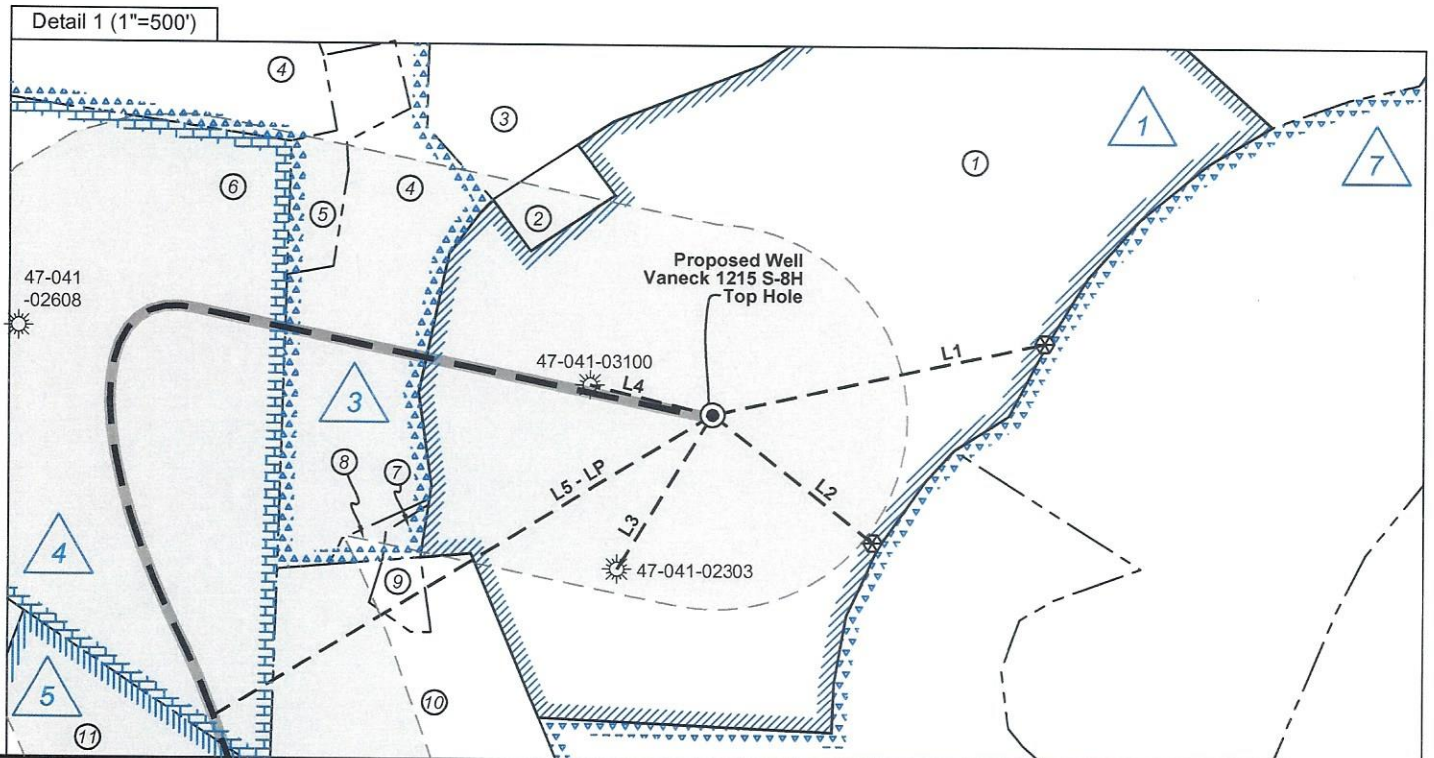
WELL OPERATOR: HG Energy II Appalachia, LLC DESIGNATED AGENT: Diane C. White
 ADDRESS: 5260 Dupont Road ADDRESS: 5260 Dupont Road
 Parkersburg, WV 26101 Parkersburg, WV 26101



Tag	Bearing	Dist.	Description
L1	S 77°29' W	887.5'	1/2" Rebar
L2	N 51°37' W	534.7'	1/2" Rebar
L3	N 31°24' E	474.1'	47-041-02303
L4	S 76°25' E	328.9'	47-041-03100
L5	S 58°27' W	1,522.4'	Landing point

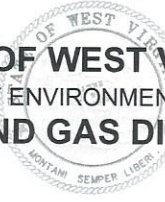
Notes: Well No. Vaneck 1215 S-8H
West Virginia Coordinate System of 1927, North Zone
based upon Differential GPS Measurements.
Top Hole coordinates Bottom Hole coordinates
Latitude: 39°06'58.64" Latitude: 39°03'35.43"
Longitude: 80°32'55.23" Longitude: 80°31'44.58"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,329,788.653m N: 4,323,533.288m
E: 539,032.840m E: 540,762.014m
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-8H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,205,314.94'
E: 1,768,476.91'
Landing Point Coordinates
N: 14,204,518.28'
E: 1,767,179.56'
Bottom Hole Coordinates
N: 14,184,792.13'
E: 1,774,150.04'



FILE NO: 156-36-UFC-20
DRAWING NO: Vaneck 1215 S-8H Well Plat
SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY:
Submeter
PROVEN SOURCE OF ELEVATION:
CORS, Bridgeport, WV

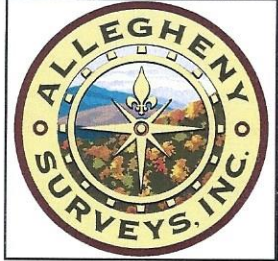
STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION



DATE: February 9 2023
OPERATOR'S WELL NO. Vaneck 1215 S-8H
API WELL NO
47 - 041 - 05737
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: Putnam
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: 28,993' MD

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

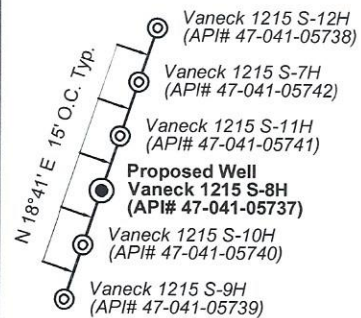


ID	Lease
1	George W. Waggoner, et ux
3	T.J. Halterman, et ux
4	George W. Waggoner, et ux
5	J.B. Halterman, et ux
6	E.W. Waggoner, et al
7	F. White
11	Thornton T. Taylor, et al
13	Israel Simmons
30	Alfred Woofter, et ux
31	Georgia E. Hall, et vir, et al
41	Carter J. Kemper, et ux, et al
43	J.L.J. Bailey, et ux
44	B.M. Davisson, et al
46	M.L. & Cordelia Butcher
50	Calvin Flesher, et ux

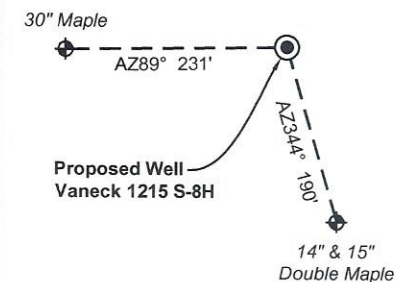
Legend

- 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.)
- Adjoiner surface tracts (approx.)

Wellhead Layout (NTS)



Well Location References (NTS)



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 / 28	Judith G. Piercy	F30 / 596	1.00
3	5C / 30	Woody Lumber Co. Inc.	590 / 438	140.50
4	5C / 7	Charles B. Curtis, Jr.	W19 / 725	45.65
5	5C / 7.3	Dustin McDougal	746 / 65	2.05
6	5C / 8	Daniel L. & Rena M. Waggoner	733 / 664	49.75
7	5C / 11	Gary P. Stalnaker	519 / 599	0.24
8	5C / 7.1	Gary P. Stalnaker	519 / 599	0.35
9	5C / 12.1	Karen J. & Timothy S. Rittenhouse	753 / 130	0.48
10	5C / 12	Daniel L. & Rena M. Waggoner	733 / 664	14.50
11	5C / 10.1	Michael L. McLaughlin	365 / 572	13.06
12	5C / 10	Stephen & Sherry Marsh	631 / 742	55.69
13	5C / 10.2	Robert E. & Pamela L. Thompson	346 / 379	19.94
14	5C / 17	Karen J. & Timothy S. Rittenhouse	481 / 611	84.75
15	5C / 25	Raymond C. & Colona J. Waggoner	567 / 416	45.48
16	5C / 19	Randal D. & Martika Mick	763 / 674	78.23
17	5C / 19.3	Roy D. & Debra D. Webb	582 / 127	1.27
18	5C / 19.2	Kevin L. & Regina L. Heckert	516 / 422	4.00
19	5D / 69	Smoke Camp Crafts, LLC	767 / 832	13.01
20	5D / 67	Smoke Camp Crafts, LLC	767 / 832	11.96
21	5C / 18	Kevin L. Heckert, et al	670 / 370	26.00
22	5D / 17	Bruce & Elizabeth C. Garrett	584 / 684	139.09
23	5D / 19	Smoke Camp Crafts, LLC	767 / 832	124.75
24	5D / 18	Smoke Camp Crafts, LLC	767 / 832	3.43
25	5D / 16	Bruce H. Garrett	W46 / 324	19.50
26	5D / 27	Bruce H. Garrett	W46 / 324	95.57
27	5D / 27.1	John T. Garrett	W46 / 324	80.00
28	5D / 12	Gerald P. Hull	W18 / 661	168.19
29	5D / 12.3	Jeffrey P. Hull	722 / 836	1.39
30	5D / 31	Edward E. Garrett	334 / 565	81.27
31	5D / 28	Sue E. Hall & Daniel E. Fisher	W34 / 597	148.50
32	5D / 29	Edward E. Garrett	334 / 565	70.25
33	5E / 18	Carolyn L. Bennett	W47 / 358	32.34
34	5E / 17	Lee M. Marsh, et al	680 / 116	57.96
35	5E / 16.1	Ted T. Garrett	591 / 747	1.93
36	5E / 16	John T. Garrett	W46 / 324	43.57
37	5E / 19.2	Charles A. Kemper	580 / 628	6.99
38	5E / 19.1	Jared D. & Rebecca J. Flesher	753 / 905	2.23
39	5E / 19	Charles A. Kemper	770 / 842	55.57
40	5E / 15	John R. & Anna M. Lamb	673 / 372	11.25
41	5E / 24.2	David & Elizabeth Nichols, et al	728 / 220	221.68
42	5D / 12.2	Matthew L. Rinehart	762 / 881	1.00
43	5E / 20	Ronald L. Cunningham, Jr, et al	426 / 546	38.00
44	5E / 30	Nancy E. & Ronald C. Smith, Jr.	599 / 759	195.24

FILE NO: 156-36-UFC-20
DRAWING NO: Vaneck 1215 S-8H 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-8H
API WELL NO
47 - 041 - 05737
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
DATE: 05/05/2023

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

PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,040' TVD 28,993' 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
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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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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

HG Energy II Appalachia, LLC - Vaneck 1215 S8H Lease Chains

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Environmental Protection

05/05/2023

12155 Tract	LEGACY LEASE NUMBER	TAX MAP	LEASE NUMBER	GRANTOR/LESSOR	GRANTEE/LESSEE	ROYALTY	DEED BOOK	PAGE
1	FK051509	03-005C-0027-0001 03-005C-0029-0000	Q100665000	GEO. W. WAGGONER AND ROSA M. WAGGONER, HIS WIFE THE PHILADELPHIA COMPANY OF WEST VIRGINIA THE PHILADELPHIA COMPANY OF WEST VIRGINIA THE PHILADELPHIA COMPANY OF WEST VIRGINIA PITTSBURG AND WEST VIRGINIA GAS COMPANY EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. NOBLE ENERGY, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC.	THE PHILADELPHIA COMPANY OF WEST VIRGINIA PITTSBURG AND WEST VIRGINIA GAS COMPANY PITTSBURG AND WEST VIRGINIA GAS COMPANY PITTSBURG AND WEST VIRGINIA GAS COMPANY EQUITABLE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC E. W. BOYD S. E. BARRETT LOUIS BENNETT J. M. GUFFEY AND INO. H. GALEY J. M. GUFFEY AND INO. H. GALEY THE PHILADELPHIA COMPANY OF WEST VIRGINIA F. N. BARNSDALL F. L. BARTLETT PITTSBURG AND WEST VIRGINIA GAS COMPANY CRUDE OIL COMPANY THE CRUDE OIL COMPANY, A WV CORP THE FEDERAL OIL & GAS COMPANY PITTSBURG AND WEST VIRGINIA GAS COMPANY PITTSBURG AND WEST VIRGINIA GAS COMPANY A. E. MACINTOSH SEPTER W. DOUGLAS ALFRED D. BARNES OIL CITY TRUST COMPANY HOPE NATURAL GAS COMPANY EQUITABLE GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC.	NOT LESS THAN 1/8 ASSIGNMENT ASSIGNMENT DEED ASSIGNMENT ASSIGNMENT CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT ASSIGNMENT (68%) NOT LESS THAN 1/8 ASSIGNMENT ASSIGNMENT (50%) ASSIGNMENT ASSIGNMENT ASSIGNMENT (50%) ASSIGNMENT ASSIGNMENT ASSIGNMENT ASSIGNMENT ASSIGNMENT ASSIGNMENT DEED ASSIGNMENT ASSIGNMENT DEED ASSIGNMENT ASSIGNMENT CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE	73 85 141 125 125 371 216 246 294 425 WVSOS WVSOS 672 684 712 717 722 WVSOS 723 734 736 35 30 30 36 36 44 44 44 46 46 46 85 92 105 100 100 125 125 141 142 171 172 172 172 216 246 294 425 WVSOS WVSOS	383 379 379 371 185 192 89 127 154 57 848 1 170 499 558 220 220 220 369 369 517 571 569 583 396 391 141 141 155 426 31 379 371 70 438 122 350 354 185 192 89 127
3	FK051508	03-005C-0007-0000 03-005C-0007-0001 03-005C-0007-0002 03-005C-0007-0003 03-005C-0011-0000	Q100429000	ALFRED D. BARNES AND MARION K. BARNES, HIS WIFE ALFRED D. BARNES AND MARION K. BARNES, HIS WIFE, AND OIL CITY TRUST COMPANY PITTSBURG AND WEST VIRGINIA GAS COMPANY EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION	HOPE NATURAL GAS COMPANY EQUITABLE GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC.	ASSIGNMENT ASSIGNMENT DEED ASSIGNMENT ASSIGNMENT CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE	171 172 172 216 246 294 425 WVSOS WVSOS	122 350 354 185 192 89 127

5	FK051505	03-005C-0010-0001 03-005C-0010-0002 03-005C-0016-0000	Q100471000	DOMINION ENERGY 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
4	FK051507	03-005C-0008-0000	Q100757000	DOMINION ENERGY 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
				DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170
				DOMINION ENERGY 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
				GEO. W. WAGGONER AND R. M. WAGGONER, HIS WIFE	E. W. BOYD	NOT LESS THAN 1/8	35	236
				E. W. BOYD	S. E. BARRETT	ASSIGNMENT	30	369
				S. E. BARRETT	LOUIS BENNETT	ASSIGNMENT (50%)	36	517
				S. E. BARRETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	44	569
				LOUIS BENNETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	44	571
				J. M. GUFFEY AND JNO. H. GALEY	THE PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	44	583
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	85	141
				THE PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125	379
				PITTSBURGH AND WEST VIRGINIA GAS COMPANY	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	DEED	371	185
				EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	EQUITABLE GAS COMPANY	ASSIGNMENT	216	185
				HOPE NATURAL GAS COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	246	192
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
CNG TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	ASSIGNMENT	425					
DOMINION TRANSMISSION, INC.	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION TRANSMISSION, INC.	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION TRANSMISSION, INC.	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	672	154				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	684	57				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	ASSIGNMENT	712	848				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	717	1				
DOMINION TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	722	170				
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499				
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	734	558				
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT (68%)	736	220				
J. B. HALTERMAN AND M. A. HALTERMAN, HIS WIFE	E. W. BOYD	NOT LESS THAN 1/8	35	233				
E. W. BOYD	S. E. BARRETT	ASSIGNMENT	30	369				
S. E. BARRETT	LOUIS BENNETT	PARTIAL ASSIGNMENT (50%)	36	517				
LOUIS BENNETT	J. M. GUFFEY AND JNO. H. GALEY	ASSIGNMENT	44	571				
J. M. GUFFEY AND JNO. H. GALEY	PHILADELPHIA COMPANY OF WEST VIRGINIA	ASSIGNMENT	44	583				
PHILADELPHIA COMPANY OF WEST VIRGINIA	PITTSBURGH & WEST VIRGINIA GAS COMPANY	ASSIGNMENT	125	379				
PITTSBURGH AND WEST VIRGINIA GAS COMPANY	PITTSBURGH AND WEST VIRGINIA GAS COMPANY	ASSIGNMENT	216	185				
EQUITABLE GAS COMPANY AND PHILADELPHIA OIL COMPANY	EQUITABLE GAS COMPANY	ASSIGNMENT	246	192				
HOPE NATURAL GAS COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	294	89				
CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS SUPPLY CORPORATION	CONFIRMATORY DEED	294	89				
CONSOLIDATED GAS TRANSMISSION CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127				
CNG TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	ASSIGNMENT	425					
DOMINION TRANSMISSION, INC.	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	51	795				
DOMINION TRANSMISSION, INC.	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	9	628				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	MEMORANDUM OF FARMOUT AGREEMENT	672	154				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	LIMITED PARTIAL ASSIGNMENT (50%)	684	57				
DOMINION TRANSMISSION, INC.	CNX GAS COMPANY LLC AND NOBLE ENERGY, INC.	PARTIAL ASSIGNMENT (32%)	712	848				
CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	ASSIGNMENT	712	1				
DOMINION TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	717	1				
DOMINION TRANSMISSION, INC.	DOMINION ENERGY TRANSMISSION, INC.	MERGER/NAME CHANGE	WVSOS					
DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC	SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT	723	499				

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		DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. E. W. WAGGONER, GEO. W. WAGGONER AND R. M. WAGGONER, HIS WIFE; AND HARRIET E. BURNSIDE, WIDOW RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT (68%) NOT LESS THAN 1/8 MERGER/NAME CHANGE CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT (68%) NOT LESS THAN 1/8 ASSIGNMENT CONFIRMATORY DEED CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT	734 736 68 155 294 425 51 9 672 684 712 717 722 WWSOS 723 734 736 40 85 155 294 425 WWSOS WWSOS 672 684 712 717 722 WWSOS 723 734 736 40 85 155 202 89 127 795 628 154 57 848 1 170 WWSOS 723 499
6 FK053264 03-0056-0012-0000 03-0056-0013-0000 03-0056-0017-0000 03-0056-0024-0000 p/o 03-0056-0025-0000	Q101027000	DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. THORNTON T. TAYLOR, S. T. TAYLOR AND M. B. TAYLOR, HIS WIFE; AND OVA LESTER AND W. G. LESTER, HER HUSBAND RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT (68%) NOT LESS THAN 1/8 CONFIRMATORY DEED CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT (68%) NOT LESS THAN 1/8 CONFIRMATORY DEED CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT	734 736 68 155 294 425 51 9 672 684 712 717 722 WWSOS 723 734 736 40 85 155 202 89 127 795 628 154 57 848 1 170 WWSOS 723 499
11 FK053266 03-005C-0019-0000 03-005C-0019-0011 03-005C-0019-0002 03-005C-0019-0003 03-005C-0021-0000 03-005C-0021-0001 03-005C-0021-0002 03-005D-0067-0000	Q100768000	DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. THORNTON T. TAYLOR, S. T. TAYLOR AND M. B. TAYLOR, HIS WIFE; AND OVA LESTER AND W. G. LESTER, HER HUSBAND RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT (68%) NOT LESS THAN 1/8 CONFIRMATORY DEED CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT (68%) NOT LESS THAN 1/8 CONFIRMATORY DEED CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT	734 736 68 155 294 425 51 9 672 684 712 717 722 WWSOS 723 734 736 40 85 155 202 89 127 795 628 154 57 848 1 170 WWSOS 723 499
7 FK053097 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-0040-0000	Q100333000	DOMINION ENERGY TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC. T. N. BARNSDALL, SOUTHERN OIL COMPANY, AND FRED S. RICH RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC. DOMINION ENERGY TRANSMISSION, INC.	HG ENERGY II APPALACHIA, LLC HG ENERGY II APPALACHIA, LLC RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. CNX GAS COMPANY LLC AND NOBLE ENERGY, INC. NOBLE ENERGY, INC. HG ENERGY II APPALACHIA, LLC DOMINION ENERGY TRANSMISSION, INC.	THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT (68%) NOT LESS THAN 1/8 CONFIRMATORY DEED CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT FARMOUT AGREEMENT	734 736 68 155 294 425 51 9 672 684 712 717 722 WWSOS 723 734 736 40 85 155 202 89 127 795 628 154 57 848 1 170 WWSOS 723 499

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<p>P/O 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>DOMINION ENERGY TRANSMISSION, INC. ISRAEL SIMMONS</p>	<p>DOMINION ENERGY TRANSMISSION, INC. HG ENERGY II APPALACHIA, LLC SOUTH PENN OIL COMPANY RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG TRANSMISSION CORPORATION DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC DOMINION TRANSMISSION, INC. CNX GAS COMPANY LLC NOBLE ENERGY, INC. DOMINION TRANSMISSION, INC.</p>	<p>THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT ASSIGNMENT (68%) NOT LESS THAN 1/8 ASSIGNMENT CONFIRMATORY DEED ASSIGNMENT MERGER/NAME CHANGE MEMORANDUM OF FARMOUT AGREEMENT LIMITED PARTIAL ASSIGNMENT (50%) PARTIAL ASSIGNMENT (32%) ASSIGNMENT MERGER/NAME CHANGE SECOND AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT THIRD AMENDMENT TO MEMORANDUM OF FARMOUT AGREEMENT ASSIGNMENT (68%)</p>	<p>734 736 42 79 155 202 294 425 WVSOS WVSOS 672 684 712 717 722 WVSOS 723 734 736</p>	<p>558 220 154 234 89 127 154 57 848 1 170 499 558 220</p>
<p>13 FK053172</p>	<p>Q100481000</p>	<p>MRS. GEORGIA E. HALL AND S. A. HALL, HER HUSBAND; LENA HUME AND EDGAR HUME, HER HUSBAND; GEORGE S. WHITE AND FLAVEL WHITE, HIS WIFE; J. D. WHITE AND MAMIE WHITE, HIS WIFE; ADA WHITE, SINGLE; MAURICE G. WHITE AND LYDIA L. WHITE, HIS WIFE; ALICE WILLIAMS WHITE GYGAX AND JOHN GYGAX, HER HUSBAND; CHARLES S. WHITE AND ALYCE G. WHITE, HIS WIFE; JOHN HENSELL WHITE AND MARY SUSAN WHITE, HIS WIFE; AND MARTHA WHITE STRALL AND LESTER STRALL, HER HUSBAND</p>	<p>NOT LESS THAN 1/8</p>	<p>259</p>	<p>652</p>
<p>31 03-005D-0028-0000</p>	<p>ALLEGHENY LAND AND MINERAL COMPANY, a WV Corporation ALLEGHENY LAND AND MINERAL COMPANY ALAMCO INC COLUMBIA NATURAL RESOURCES INC COLUMBIA NATURAL RESOURCES LLC CHESAPEAKE APPALACHIA LLC STATOILHYDRO USA ONSHORE PROPERTIES INC CHESAPEAKE APPALACHIA LLC AND WINTER MOON ENERGY CORPORATION STATOIL USA ONSHORE PROPERTIES INC STATOIL USA ONSHORE PROPERTIES INC SWN EXCHANGE TITLEHOLDER LLC SWN PRODUCTION COMPANY LLC & EQUINOR USA ONSHORE PROPERTIES INC.</p>	<p>ALLEGHENY LAND AND MINERAL COMPANY a DE Corporation ALAMCO INC COLUMBIA NATURAL RESOURCES INC COLUMBIA NATURAL RESOURCES LLC CHESAPEAKE APPALACHIA LLC STATOILHYDRO USA ONSHORE PROPERTIES INC STATOIL USA ONSHORE PROPERTIES INC SWN PRODUCTION COMPANY LLC SWN EXCHANGE TITLEHOLDER LLC EQUINOR USA ONSHORE PROPERTIES INC. SWN PRODUCTION COMPANY LLC HG ENERGY II APPALACHIA, LLC</p>	<p>ASSIGNMENT MERGER/NAME CHANGE CONVANCE DEED MERGER/NAME CHANGE CONFIRMATORY DEED PARTIAL ASSIGNMENT (32.5%) MERGER/NAME CHANGE ASSIGNMENT PARTIAL ASSIGNMENT (20%) MERGER/NAME CHANGE MERGER/NAME CHANGE ASSIGNMENT NOT LESS THAN 1/8 CONFIRMATORY DEED CONFIRMATORY DEED ASSIGNMENT DEED MERGER/NAME CHANGE MERGER/NAME CHANGE</p>	<p>401 457 554 WVSOS 603 632 WVSOS 684 687 WVSOS 9 778 58 155 294 380 425 438 WVSOS WVSOS</p>	<p>538 667 184 285 50 333 407 637 719 459 202 89 20 127 379</p>
<p>30 FK053205</p>	<p>03-005D-0031-0000 p/o 03-005D-0030-0000 03-005D-0030-0001 p/o 03-005D-0030-0002 03-005D-0029-0000 03-005D-0029-0000</p>	<p>RESERVE GAS COMPANY HOPE NATURAL GAS COMPANY CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS SUPPLY CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CONSOLIDATED GAS TRANSMISSION CORPORATION CNG DEVELOPMENT COMPANY</p>	<p>ASSIGNMENT MERGER/NAME CHANGE MERGER/NAME CHANGE ASSIGNMENT DEED MERGER/NAME CHANGE MERGER/NAME CHANGE</p>	<p>58 155 294 380 425 438 WVSOS WVSOS</p>	<p>459 202 89 20 127 379</p>

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46		03-005E-0024-0000 03-005E-0024-0001 03-005E-0024-0002		T. N. BARNSDALL, THE SOUTHERN OIL COMPANY, FRED S. RICH, AND W. S. MORRIS	RESERVE GAS COMPANY	ASSIGNMENT (MISC BOOK NO PAGE NUMBER)	85	106
				RESERVE GAS COMPANY	UNITED FUEL GAS COMPANY	ASSIGNMENT		
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	UNRECORDED	335	
				UNITED FUEL GAS COMPANY	HOPE NATURAL GAS COMPANY	CONFIRMATORY DEED	155	202
				HOPE NATURAL GAS COMPANY	CONSOLIDATED GAS SUPPLY CORPORATION	ASSIGNMENT	170	190
				CONSOLIDATED GAS SUPPLY CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	CONFIRMATORY DEED	294	89
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CNG TRANSMISSION CORPORATION	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	9	628
				DOMINION TRANSMISSION, INC.	CONSOL ENERGY HOLDING LLC XVI	MERGER/NAME CHANGE	651	318
				CONSOL ENERGY HOLDING LLC XVI	CONSOL ENERGY HOLDING LLC XVI	ASSIGNMENT	9	471
				CONSOL GAS COMPANY	CNX GAS COMPANY LLC	MERGER/NAME CHANGE	9	471
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	MERGER/NAME CHANGE	9	471
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	717	1
				CONSOL GAS COMPANY	CNX GAS COMPANY LLC	ASSIGNMENT	722	170
				CNX GAS COMPANY LLC	HG ENERGY II APPALACHIA, LLC	MERGER/NAME CHANGE	9	471
						JOINT OPERATING AGREEMENT	796	642
50	CNX053114	03-005E-0030-0000 03-005E-0033-0000 03-005F-0035-0000 03-005F-0035-0001	CNX053114	T. N. BARNSDALL, THE SOUTHERN OIL COMPANY, FRED S. RICH, AND W. S. MORRIS	RESERVE GAS COMPANY	ASSIGNMENT	85	106
				RESERVE GAS COMPANY	UNITED FUEL GAS COMPANY	ASSIGNMENT		
				RESERVE GAS COMPANY	HOPE NATURAL GAS COMPANY	UNRECORDED	85	
				UNITED FUEL GAS COMPANY	HOPE NATURAL GAS COMPANY	ASSIGNMENT	155	202
				CONSOLIDATED GAS SUPPLY CORPORATION	HOPE NATURAL GAS COMPANY	ASSIGNMENT	170	190
				CONSOLIDATED GAS TRANSMISSION CORPORATION	CONSOLIDATED GAS TRANSMISSION CORPORATION	ASSIGNMENT	425	127
				CNG TRANSMISSION CORPORATION	CNG TRANSMISSION CORPORATION	MERGER/NAME CHANGE	51	795
				DOMINION TRANSMISSION, INC.	DOMINION TRANSMISSION, INC.	MERGER/NAME CHANGE	9	628
				CONSOL ENERGY HOLDING LLC XVI	CONSOL ENERGY HOLDING LLC XVI	ASSIGNMENT	651	318
				CONSOL GAS COMPANY	CNX GAS COMPANY LLC	MERGER/NAME CHANGE	9	471
				CNX GAS COMPANY LLC	NOBLE ENERGY, INC.	MERGER/NAME CHANGE	9	471
				NOBLE ENERGY, INC.	HG ENERGY II APPALACHIA, LLC	ASSIGNMENT	717	1
				CONSOL GAS COMPANY	CNX GAS COMPANY LLC	ASSIGNMENT	722	170
				CNX GAS COMPANY LLC	HG ENERGY II APPALACHIA, LLC	MERGER/NAME CHANGE	9	471
						JOINT OPERATING AGREEMENT	796	642

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

CK# 035446
\$ 5000⁰⁰
Expedited

April 17, 2022

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

RE: Vaneck 1215 S-8H Drill Permit Revision Request – (47-041-05737)
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-8H 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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