



west virginia department of environmental protection

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

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

Tuesday, June 1, 2021
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

HG ENERGY II APPALACHIA, LLC
5260 DUPONT ROAD
PARKERSBURG, WV 26101

Re: Permit Modification Approval for FLESHER 1212 N-1H
47-041-05710-00-00

Landing Point Update. Total Measured Depth change 26687' to 26715'.

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 positioned above the printed name and title.

James A. Martin
Chief

Operator's Well Number: FLESHER 1212 N-1H
Farm Name: H. G. ENERGY II APPALACHIA, LLC
U.S. WELL NUMBER: 47-041-05710-00-00
Horizontal 6A New Drill
Date Modification Issued: 06/01/2021

Promoting a healthy environment.

06/04/2021

WW-6B
(04/15)

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Office of Oil and Gas

MAY 27 2021

API NO. 47- _____ - _____
OPERATOR WELL NO. Flesher 1212 N-1H
Well Pad Name: Flesher 1212

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

1) Well Operator: HG Energy II Appalachia, L.P. 494519932 Lewis Freeman Weston 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Flesher 1212 N-1H Well Pad Name: Flesher 1212

3) Farm Name/Surface Owner: Flesher Public Road Access: SR19 to Kincheloe Run Rd to Valley Chapel Rd

4) Elevation, current ground: 1338' Elevation, proposed post-construction: 1332'

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

(b) If Gas Shallow Deep _____
Horizontal _____

6) Existing Pad: Yes or No No

SPW
5/21/2021

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus at 6845'/6927' and 82' in thickness. Anticipated pressure at 4314#.

8) Proposed Total Vertical Depth: 6925'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 26,715'

11) Proposed Horizontal Leg Length: 18,945'

12) Approximate Fresh Water Strata Depths: 105', 273', 302'

13) Method to Determine Fresh Water Depths: Nearest offset well data, (47-041-5338, 0218)

14) Approximate Saltwater Depths: 1028' (Nearest offset well data, 47-041-1673)

15) Approximate Coal Seam Depths: 420', 525' 830' (Surface casing is being extended to cover the coal in the DTI Storage 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: _____

WW-6B
(04/15)

API NO. 47- _____ -
 OPERATOR WELL NO. Flesher 1212 N-1H
 Well Pad Name: Flesher 1212

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'	RESERVED Office of Oil and Gas
Fresh Water/Coal	20"	NEW	J-55	94	1000'	1000'	CTS MAY 27 2021
Intermediate 1	13 3/8"	NEW	J-55 BTC	68	2100'	2100'	CTS
Intermediate 2	9 5/8"	NEW	J-55 BTC	40	2900'	2900'	WV Department of Environmental Protection
Production	5 1/2"	NEW	P-110 HP	23	26715'	26715' ✓	CTS
Tubing							
Liners							

SDe
5/21/2021

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	3950		Type 1/Class A	Lead 40% excess, Tail 0% Excess
Production	5 1/2"	8 1/2"	.415	16240	12500	Type 1/Class A	20% excess yield = 1.19, tail yield 1.54
Tubing							
Liners							

PACKERS

Kind:				
Sizes:				
Depths Set:				

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

Drill the vertical depth to the Marcellus at an estimated total vertical depth of approximately 6925 feet. Drill horizontal leg to estimated 18,945' lateral length, 26,715' 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.

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21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 33.54 acres

22) Area to be disturbed for well pad only, less access road (acres): 6.84 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 - Run 1 spiral centralizer every 5 joints from the top of the curve to surface. Run 1 spiral centralizer every 3 joints from the 1st 5.5' long joint to the top of the curve.

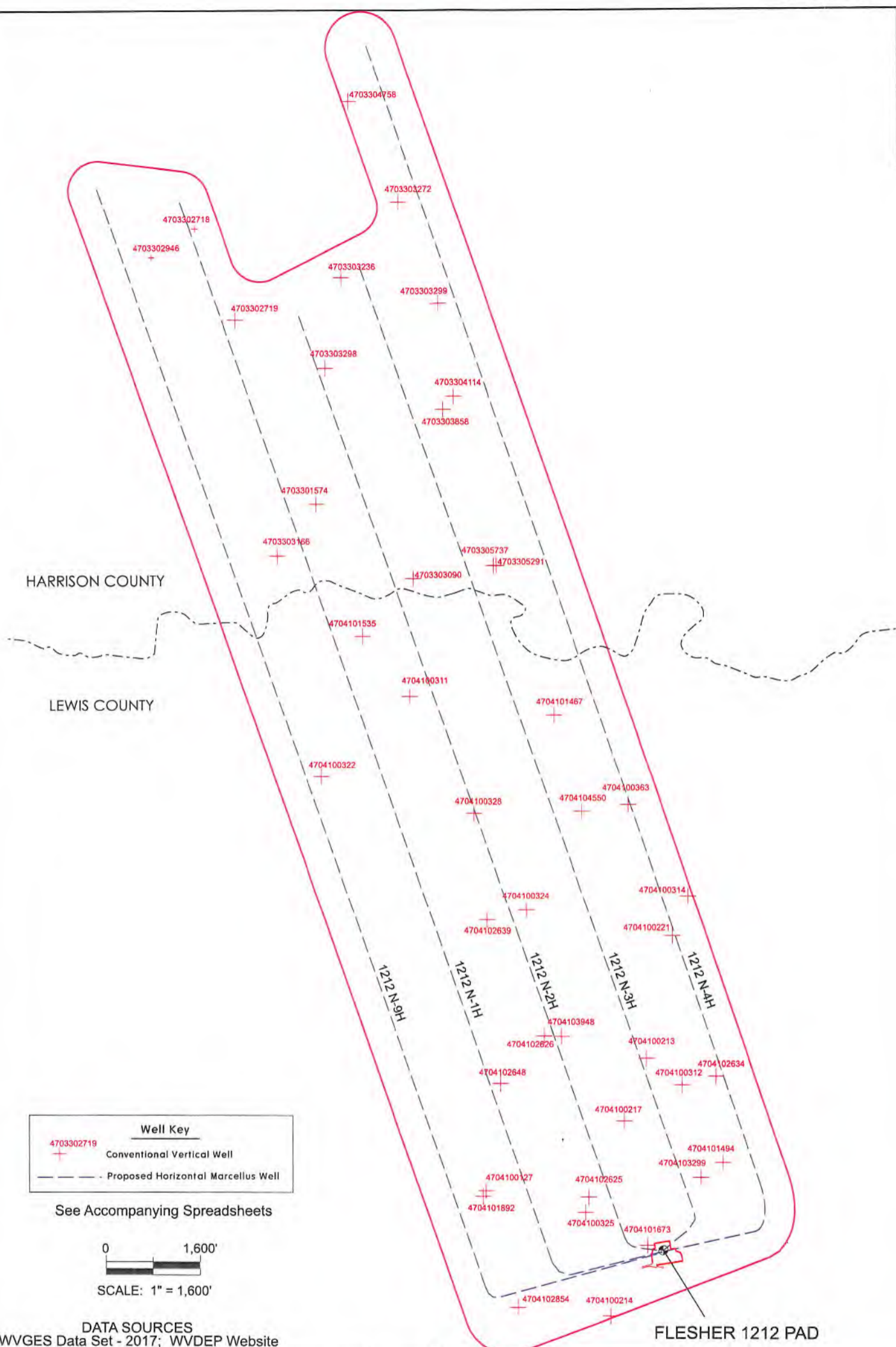
24) Describe all cement additives associated with each cement type:

Conductor - N/A, Casing to be drilled in w/ Dual Rotary Rig.
Fresh Water/Coal - 15.6 ppg PNE-1 + 3% bwoc CaCl, 40% Excess Yield = 1.20, CTS
Intermediate 1 - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl, 40% Excess / Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl zero% Excess, CTS
Intermediate 2 - Lead: 15.4 ppg PNE-1 + 2.5% bwoc CaCl, 40% Excess, Tail: 15.9 ppg PNE-1 + 2.5% bwoc CaCl, zero% Excess, CTS
Production - Lead: 14.5 ppg POZ/PNE-1 + 0.3% bwoc R3 + 1% bwoc EC1 + 0.75 gal/sk FP13L + 0.3% bwoc MPA170, Tail: 14.9 ppg PNE-1 + 0.35% bwoc R3 + 0.75 gal/sk FP13L + 50% bwoc ASCA1 + 0.5% bwoc MPA170 20% Excess, Lead Yield=1.19, Tail Yield=1.94, CTS

25) Proposed borehole conditioning procedures:

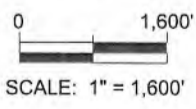
Conductor - Ensure the hole is clean at TD.
Fresh Water/Coal - Once casing is at setting depth, circulate a minimum of one hole volume with Fresh Water prior to pumping cement.
Intermediate 1 - Once casing is at setting depth, Circulate and condition at TD. Circulate a minimum of one hole volume prior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

*Note: Attach additional sheets as needed.



Well Key	
	4703302719 Conventional Vertical Well
	Proposed Horizontal Marcellus Well

See Accompanying Spreadsheets



DATA SOURCES
WVGES Data Set - 2017; WVDEP Website

FLESHER 1212 PAD

Area of Review for:

FLESHER 1212 NORTH UNIT

- Proposed 1212 N-1H
- Proposed 1212 N-2H
- Proposed 1212 N-3H
- Proposed 1212 N-4H
- Proposed 1212 N-9H

Freeman's Creek District, Lewis County, W.Va.
& Union District, Harrison County, W.Va.

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HG ENERGY, II APPALACHIA, LLC
 5260 DuPont Road, Parkersburg, WV 26101



Updated: 5/12/2021

EXISTING WELLS LOCATED WITHIN THE AREA OF REVIEW FOR:

FLESHER 1212 NORTH UNIT AND PROPOSED WELLS N-1H, N-2H, N-3H, N-4H & N-9H

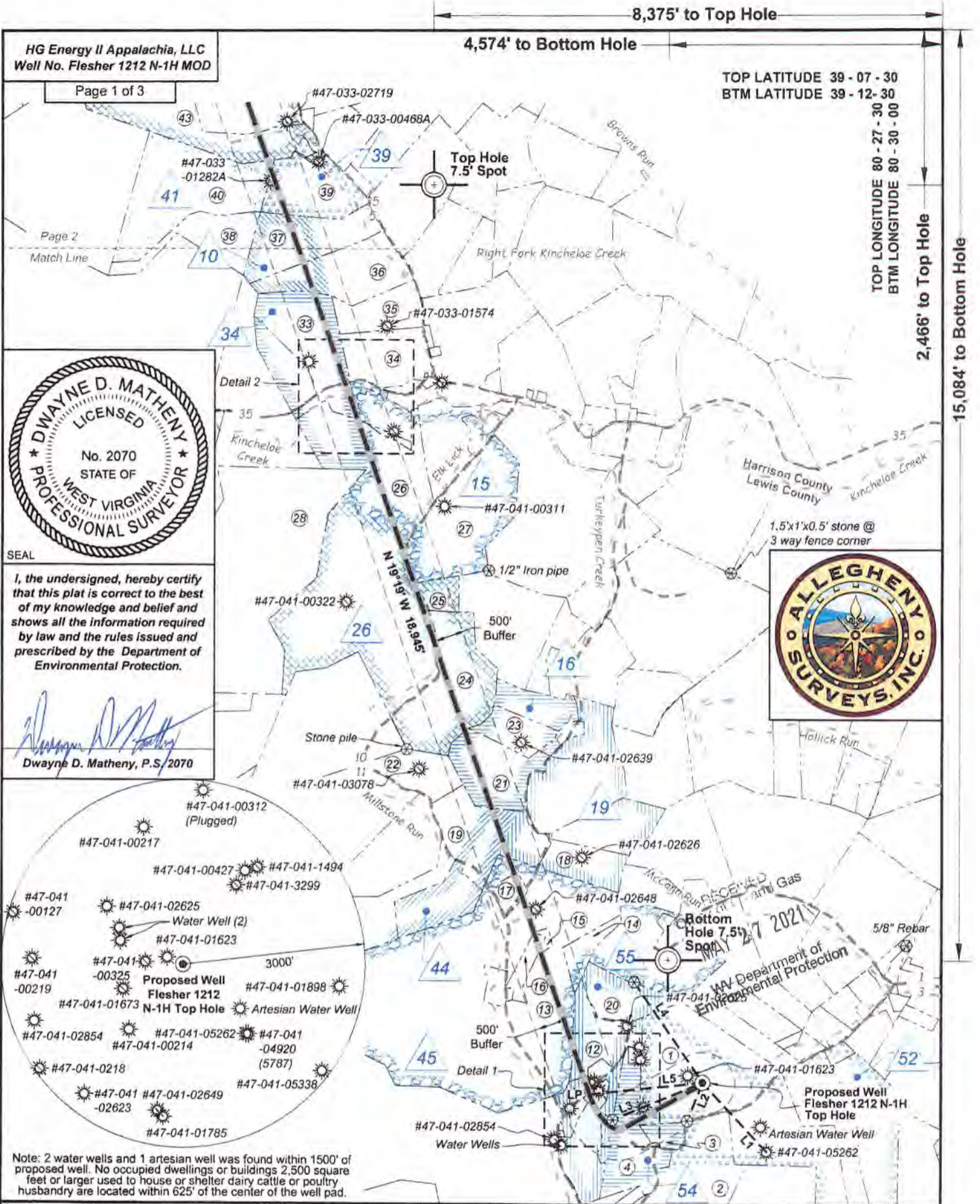
CT	API	COUNTY	FARM	OPERATOR NAME	FORMATION NAME	WELL TYPE	TVD	STATUS	LATITUDE	LONGITUDE
1	4703301574	Harrison	Beeghley	Dominion Energy Transmission, Inc.	Hampshire Grp	Gas	2625	ACTIVE	39.152970	-80.508015
2	4703302718	Harrison	Coffindaaffer, J	Tenmile Land LLC	Elk	Gas	5526	ACTIVE	39.165741	-80.515096
3	4703302719	Harrison	Coffindaaffer, J	Tenmile Land LLC	Elk	Gas	5512	ACTIVE	39.161514	-80.512726
4	4703302946	Harrison	Coffindaaffer, J	Tenmile Land LLC	Elk	Gas	5693	ACTIVE	39.164435	-80.517705
5	4703303090	Harrison	C C Tallman/M P Davis 1	Dominion Energy Transmission, Inc.	Hampshire Grp	Gas	2385	PLUGGED	39.149500	-80.502237
6	4703303166	Harrison	R Stanley	Dominion Energy Transmission, Inc.	Alexander	Gas	5273	ACTIVE	39.150573	-80.510360
7	4703303236	Harrison	William L/S Coffindaffer	Alliance Petroleum Co., LLC	Greenland Gap Fm	Gas	5200	ACTIVE	39.163430	-80.506373
8	4703303272	Harrison	William L Coffindaffer	Alliance Petroleum Co., LLC	Greenland Gap Fm	Gas	5000	ACTIVE	39.166933	-80.502915
9	4703303298	Harrison	Loxie V McLung	Alliance Petroleum Co., LLC	Balltown	Oil and Gas	3650	ACTIVE	39.159262	-80.507375
10	4703303299	Harrison	Sherry D Baldwin etal	Alliance Petroleum Co., LLC	Greenland Gap Fm	Gas	5100	ACTIVE	39.162227	-80.500606
11	4703303858	Harrison	Catherine C Price	Diversified Resources, Inc.	not available	not available	-	Not Drilled	39.157331	-80.500374
12	4703304114	Harrison	Catherine C Price 1	Enervest Operating, LLC	Greenland Gap Fm	Gas	4800	ACTIVE	39.157941	-80.499754
13	4703304758	Harrison	Geraldine C Dickenson Est	Dominion Energy Transmission, Inc.	Benson	Gas	4950	ACTIVE	39.171609	-80.505825
14	4703305291	Harrison	William R Dallas	Consol Gas Company	not available	not available	-	Not Drilled	39.150104	-80.497282
15	4703305737	Harrison	William R Dallas	Dominion Energy Transmission, Inc.	Alexander	Gas	4950	ACTIVE	39.150090	-80.497450
16	4704100127	Lewis	Edwin Gaston	Dominion Energy Transmission, Inc.	Fifth	Gas	2380	PLUGGED	39.121173	-80.498140
17	4704100213	Lewis	W T Garton	Dominion Energy Transmission, Inc.	Gantz	Storage	1850	ACTIVE	39.127276	-80.488549
18	4704100214	Lewis	Geo Norris	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	2275	ACTIVE	39.115382	-80.490758
19	4704100217	Lewis	Edwin Gaston	Dominion Energy Transmission, Inc.	Gantz	Storage	1890	ACTIVE	39.124393	-80.489885
20	4704100221	Lewis	F L Post 2	Dominion Energy Transmission, Inc.	Gantz	Storage	1970	ACTIVE	39.132930	-80.486946
21	4704100311	Lewis	A Hughes	Dominion Energy Transmission, Inc.	Up Devonian	Storage	2199	ACTIVE	39.144083	-80.502504
22	4704100312	Lewis	W T Garton	Dominion Energy Transmission, Inc.	Hampshire Grp	Gas	2263	PLUGGED	39.126053	-80.486425
23	4704100314	Lewis	F L Post	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	2397	ACTIVE	39.134769	-80.485998
24	4704100322	Lewis	A H Hughes	UNKNOWN	Hampshire Grp	Gas	2601	PLUGGED	39.140364	-80.507823
25	4704100324	Lewis	Clark Gaston	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	2106	ACTIVE	39.134155	-80.495652
26	4704100325	Lewis	George Norris	Hope Natural Gas Company	Hampshire Grp	Gas	2228	PLUGGED	39.120161	-80.492216
27	4704100328	Lewis	H J Hughes	Dominion Energy Transmission, Inc.	Hampshire Grp	Storage	2401	ACTIVE	39.138624	-80.498743
28	4704100363	Lewis	N J Oldaker	UNKNOWN	Up Devonian	Storage	1905	PLUGGED	39.139006	-80.489544
29	4704101467	Lewis	H J Hughes	UNKNOWN	Fifth	Storage	2407	PLUGGED	39.143186	-80.493922
30	4704101494	Lewis	S R Hall	Dominion Energy Transmission, Inc.	Fifth	Storage	2453	ACTIVE	39.122439	-80.484011
31	4704101535	Lewis	Virginia Hughes	Dominion Energy Transmission, Inc.	Fifth	Dry	2576	PLUGGED	39.146842	-80.505298
32	4704101673	Lewis	Cecil I Dempsey	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4509	ACTIVE	39.118627	-80.488538
33	4704101892	Lewis	Edwin Gaston	Dominion Energy Transmission, Inc.	Benson	Storage	4470	ACTIVE	39.120917	-80.498325

WV Department of Environmental Protection
 MAY 27 2021

34	4704102625	Lewis	J S Norris	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.120873	-80.492026
35	4704102626	Lewis	A R Frashuer	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.128328	-80.494641
36	4704102634	Lewis	T S Allman	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.126443	-80.484399
37	4704102639	Lewis	H L Frashuer	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.133693	-80.497995
38	4704102648	Lewis	Edwin Gaston	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.126152	-80.497246
39	4704102854	Lewis	J S Norris	Dominion Energy Transmission, Inc.	not available	Storage	-	ACTIVE	39.115783	-80.496273
40	4704103299	Lewis	Susan Hall	Dominion Energy Transmission, Inc.	not available	not available	2368	PLUGGED	39.122284	-80.485081
41	4704103948	Lewis	John Mann	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4575	ACTIVE	39.128306	-80.493609
42	4704104550	Lewis	R E/Terry Brincefield	Dominion Energy Transmission, Inc.	Greenland Gap Fm	Gas	4618	ACTIVE	39.138691	-80.492300
UPDATED 5/12/2021					YELLOW DENOTES WELL WITH TVD > 4,500'			GREEN DENOTES SURVEYED WELLS		

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

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 MAY 27 2021
 WV Department of
 Environmental Protection



HG Energy II Appalachia, LLC
Well No. Flesher 1212 N-1H MOD

8,375' to Top Hole
4,574' to Bottom Hole

TOP LATITUDE 39 - 07 - 30
BTM LATITUDE 39 - 12 - 30

TOP LONGITUDE 80 - 27 - 30
BTM LONGITUDE 80 - 30 - 00

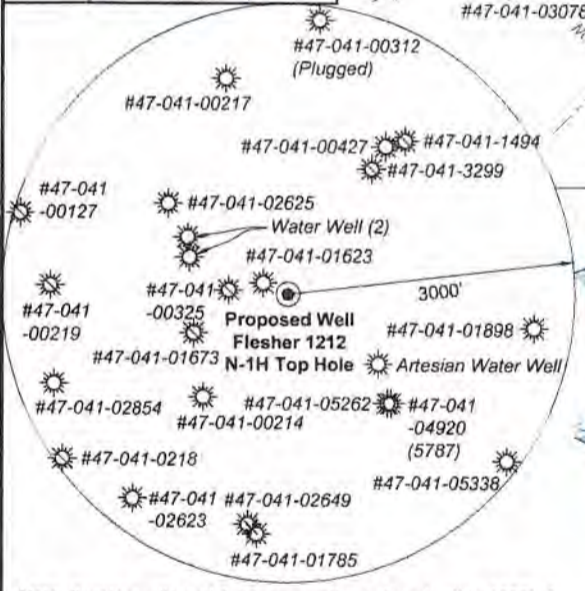
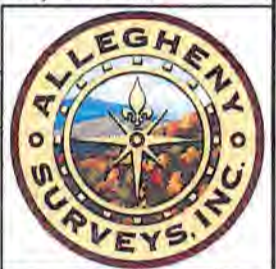
2,466' to Top Hole
15,084' to Bottom Hole

Page 1 of 3
Page 2
Match Line



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, P.S. 2070



Note: 2 water wells and 1 artesian 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: 156-36-12-U-F-19
DRAWING NO: Flesher 1212 N-1H 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

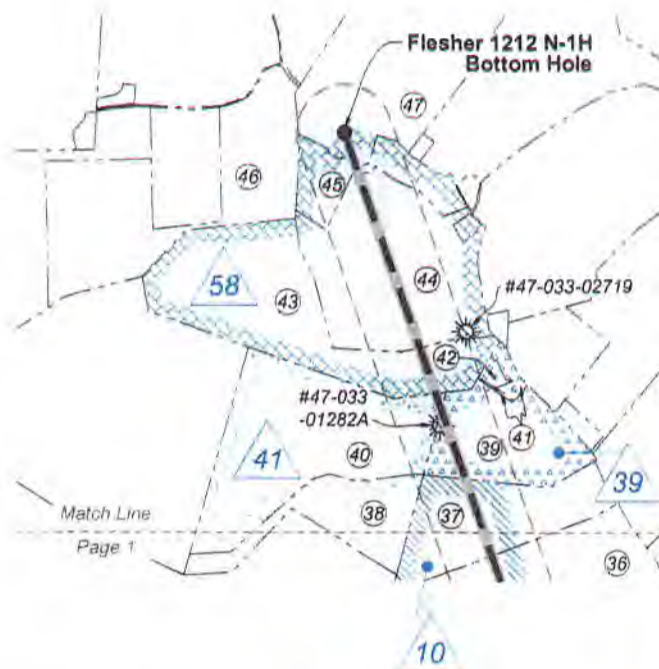
DATE: May 14 2021
OPERATOR'S WELL NO. Flesher 1212 N-1H
API WELL NO
47 - 041 - 05710
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,332.2' WATERSHED: Middle West Fork Creek
DISTRICT: Freemans Creek
SURFACE OWNER: H.G. Energy II Appalachia, LLC
ROYALTY OWNER: W.D. Hitt, et al, et al LEASE NO: ACREAGE: 210.00

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) LP - MOD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 26,716' 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



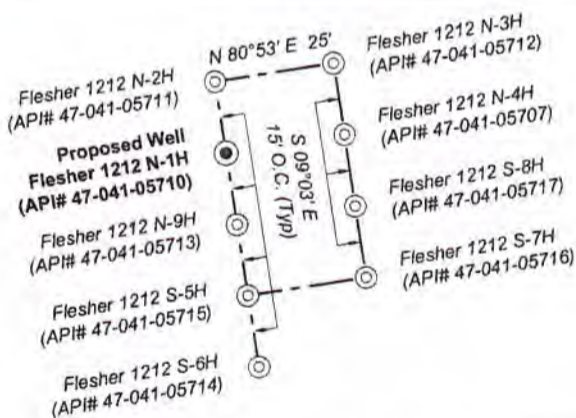
ID	Lease
10	W.H. Coffindaffer, et al
15	Alvadore Hughes, et al
16	Henry Frashuer, et al
19	A.R. Frashuer, et al
26	Alvadore Hughes, et al
34	W.W. Paugh, et al
39	Robert Max McDonald, Trustee
41	Betty A. Coffindaffer, et al
44	A.H. Reed, et al
45	Edwin Gaston, et al
52	W.D. Hitt, et al
54	Pearle A. Norris, et al
55	J.S. Norris, et al
58	Robert W. Coffindaffer, et al

Notes: Well No. Flesher 1212 N-1H
West Virginia Coordinate System of 1927, North Zone
based upon Differential GPS Measurements.
Top Hole coordinates Bottom Hole coordinates
Latitude: 39°07'05.62" Latitude: 39°10'00.86"
Longitude: 80°29'16.30" Longitude: 80°30'58.14"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,330,031.659m N: 4,335,420.257m
E: 544,289.285m E: 541,814.752m
Plat orientation and corner and well references are
based upon the grid north meridian. Well location
references are based upon the magnetic meridian.

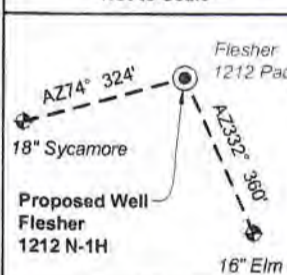
Notes:
Well No. Flesher 1212 N-1H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,206,112.20'
E: 1,785,722.43'
Landing Point Coordinates
N: 14,205,918.94'
E: 1,783,866.28'
Bottom Hole Coordinates
N: 14,223,791.28'
E: 1,777,603.90'

Tag	Bearing	Dist.	Description
L1	N 42°53' W	1,552.4'	#47-041-05262
L2	N 21°41' E	676.4'	1/2" Rebar
L3	N 67°29' E	1,597.9'	1" Iron pipe
L4	N 34°25' E	1,992.8'	5/8" Rebar
L5	S 84°03' W	1,866.2'	Landing point

Wellhead Layout (NTS)



Well Location References
Not to Scale



Legend

- ⊙ Proposed gas well
- ⊕ Well Reference, as noted
- ⊗ Monument, as noted
- ☀ Existing Well, as noted
- ☀ Digitized Well, as noted
- - - - - Creek or Drain
- - - - - Existing Road
- Surface boundary (approx.)
- - - - - Interior surface tracts (approx.)

FILE NO: 156-36-12-U-F-19
DRAWING NO: Flesher 1212 N-1H 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: May 14 2021
OPERATOR'S WELL NO. Flesher 1212 N-1H
API WELL NO
47 — 041 — 05710
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,332.2' WATERSHED: Middle West Fork Creek
DISTRICT: Freemans Creek

Btm: Big Isaac
QUADRANGLE: Top: Weston
COUNTY: Lewis 06/04/2021
ACREAGE: 70.00

SURFACE OWNER: H.G. Energy II Appalachia, LLC

ROYALTY OWNER: W.D. Hitt, et al, et al

LEASE NO: _____ ACREAGE: 210.00

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

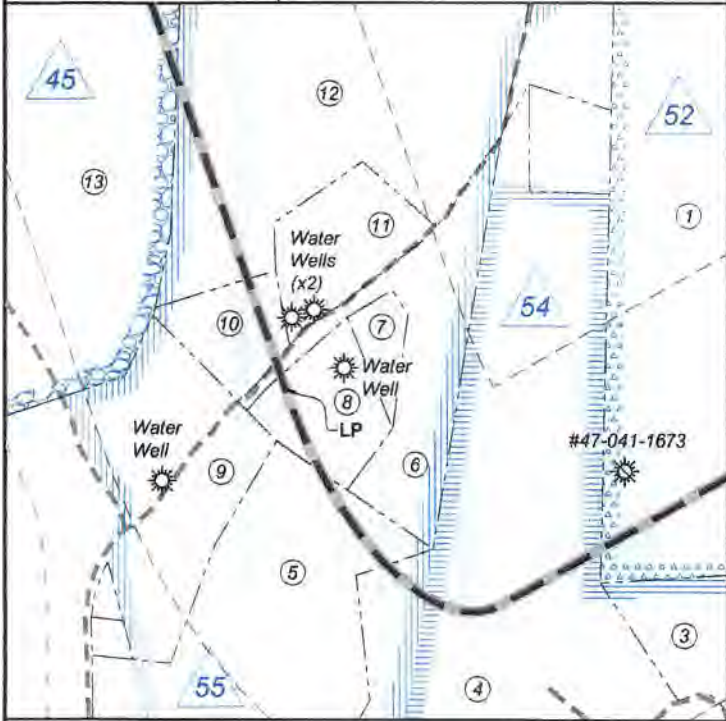
PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,925' TVD 26,716' MD

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



Detail 1 (Scale 1"=500')



Detail 2 (Scale 1"=500')



Lewis Co. - Freeman Creek Dist.

No.	TM / Par	Owner	Bk / Pg	Ac.
1	6C / 47	HG Energy II Appalachia, LLC	753 / 453	70.00
2	6C / 43	Gary Allen Sias	646 / 688	50.59
3	6C / 25.1	William Radtka & Helen Burton	655 / 681	5.85
4	6C / 25	Robert M. Painter	629 / 411	27.48
5	6C / 23.2	Michael & Laura Phillips	661 / 298	21.32
6	6C / 23.4	Richard G. Hayhurst, et ux	565 / 326	4.13
7	6C / 23.10	Gary Farris	700 / 769	0.65
8	6C / 23.6	Gary Farris	700 / 769	2.02
9	6C / 21	Thomas R. Zinn, et al	445 / 493	166.25
10	6C / 23.5	Larry Jarrett & Michelle Casey	661 / 455	1.53
11	6C / 23.7	Gary C. & Brenda J. Maki	671 / 327	2.40
12	6C / 23.3	Richard G. Hayhurst, et ux	566 / 470	19.37
13	6C / 22	Mann Family Trust	617 / 608	265.19
14	6C / 58	Mann Family Trust	617 / 608	7.62
15	6C / 22.4	Stephen & Wendy Mann	724 / 907	1.22
16	6C / 22.2	Stephen & Wendy Mann	718 / 175	5.97
17	6C / 22.1	Monika K.M. & Richard A. Weldon	674 / 314	5.00
18	6B / 31	Mann Family Trust	617 / 608	17.00
19	6B / 13	Mann Family Trust	617 / 608	38.55
20	6C / 23	Richard G. Hayhurst, et ux	566 / 355	34.80
21	6B / 28	Robert E. Brincefield Jr. & Terri Lynne Trust, et al	578 / 630	31.00
22	6B / 16	Mann Family Trust	617 / 608	21.45
23	6B / 27	Robert E. Brincefield Jr. & Terri Lynne Trust, et al	578 / 630	14.00
24	6B / 19.1	Robert E. Brincefield Jr. & Terri Lynne Trust, et al	578 / 630	52.00
25	6B / 20.1	Robert E. Brincefield Jr. & Terri Lynne Trust, et al	578 / 630	9.00
26	6B / 21	Mark B. Bostard	W50 / 769	195.91
27	6B / 21.1	Robert E. Brincefield Jr. & Terri Lynne Trust, et al	578 / 630	44.00
28	6B / 3	Eric B. & Kathy A. Beevers	509 / 197	99.00
29	6B / 50	Jackie & Barbara Caplinger	1416 / 1052	10.49

Harrison Co. - Union-Outside Dist.

No.	TM / Par	Owner	Bk / Pg	Ac.
30	443 / 17	Jackie & Barbara Caplinger	1416 / 1052	1.53
31	442 / 14	Jackie & Barbara Caplinger	1416 / 1052	12.00
32	442 / 13.1	Virginia E. Grogg	1379 / 1109	15.20
33	442 / 13	Kimberly S. Shaw	1544 / 132	34.02
34	443 / 2	Lou Ann Baker	1307 / 1155	26.54
35	443 / 1	Lou Ann Baker	1323 / 1089	25.14
36	422 / 38	Jody Ross & Dawn Price	1283 / 546	36.77
37	422 / 37	Jody Ross & Dawn Price	1283 / 546	34.70
38	422 / 34.1	Mark J. Coffindaffer	W160 / 415	24.07
39	422 / 35	Jody Ross & Dawn Price	1283 / 546	31.16
40	422 / 34	Terry Bostardi, et al	1617 / 374	66.56
41	422 / 20	Jody Ross & Dawn Price	1283 / 546	3.66
42	422 / 20.1	Brittany Ross & Vance Miller	1482 / 996	1.70
43	422 / 16	Terry Bostardi, et al	1617 / 374	62.61
44	422 / 18	Stephen J. & Freda P. Perkins	1258 / 66	61.60
45	422 / 17	Stephen J. & Freda P. Perkins	1258 / 66	16.87
46	422 / 15.1	Stephen J. & Freda P. Perkins	1560 / 347	61.48
47	422 / 10	Stephen J. & Freda P. Perkins	994 / 752	96.00

FILE NO: 156-36-12-U-F-19
DRAWING NO: Flesher 1212 N-1H 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: May 14 2021
OPERATOR'S WELL NO. Flesher 1212 N-1H
API WELL NO
47 - 041 - 05710
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,332.2' WATERSHED: Middle West Fork Creek
DISTRICT: Freemans Creek

Btm: Big Isaac
QUADRANGLE: Top: Weston
COUNTY: Lewis
ACREAGE: 70.00

SURFACE OWNER: H.G. Energy II Appalachia, LLC
ROYALTY OWNER: W.D. Hitt, et al, et al

LEASE NO: ACREAGE: 210.00

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) LP - MOD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,925' TVD 26,716' 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

HG Energy II Appalachia, LLC
Well No. Flesher 1212 N-1H MOD

Page 1 of 3

4,574' to Bottom Hole

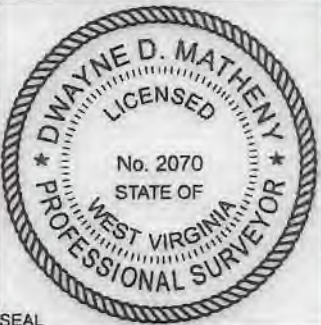
8,375' to Top Hole

TOP LATITUDE 39 - 07 - 30
BTM LATITUDE 39 - 12 - 30

TOP LONGITUDE 80 - 27 - 30
BTM LONGITUDE 80 - 30 - 00

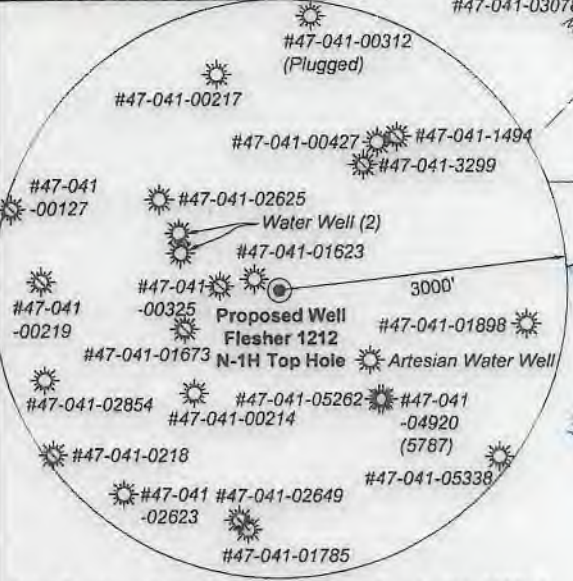
2,466' to Top Hole

15,084' to Bottom Hole



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 wells and 1 artesian 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: 156-36-12-U-F-19
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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: May 14 2021
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API WELL NO
47 - 041 - 05710
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,332.2' WATERSHED: Middle West Fork Creek

QUADRANGLE: Btm: Big Isaac
Top: Weston
COUNTY: Lewis

DISTRICT: Freemans Creek

SURFACE OWNER: H.G. Energy II Appalachia, LLC

ACREAGE: 70.00

ROYALTY OWNER: W.D. Hitt, et al, et al

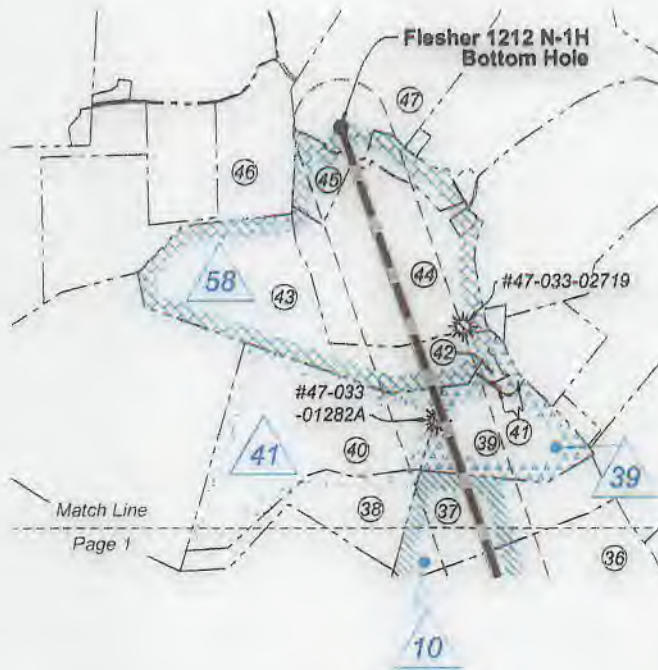
LEASE NO: ACREAGE: 210.00

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

PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,925' TVD
26,716' 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



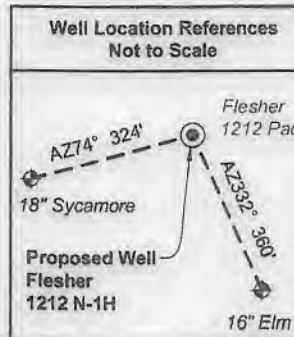
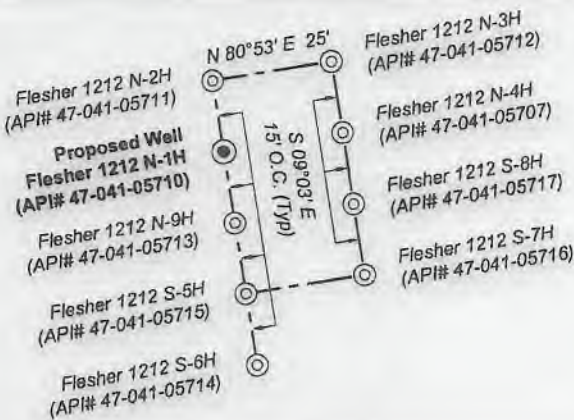
Notes: Well No. Flesher 1212 N-1H
West Virginia Coordinate System of 1927, North Zone
based upon Differential GPS Measurements.
Top Hole coordinates Bottom Hole coordinates
Latitude: 39°07'05.62" Latitude: 39°10'00.86"
Longitude: 80°29'16.30" Longitude: 80°30'58.14"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,330,031.659m N: 4,335,420.257m
E: 544,289.285m E: 541,814.752m
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. Flesher 1212 N-1H
UTM NAD 1983 (USSF)
Top Hole Coordinates
N: 14,206,112.20'
E: 1,785,722.43'
Landing Point Coordinates
N: 14,205,918.94'
E: 1,783,866.28'
Bottom Hole Coordinates
N: 14,223,791.28'
E: 1,777,603.90'

ID	Lease
10	W.H. Coffindaffer, et al
15	Alvadore Hughes, et al
16	Henry Frashuer, et al
19	A.R. Frashuer, et al
26	Alvadore Hughes, et al
34	W.W. Paugh, et al
39	Robert Max McDonald, Trustee
41	Betty A. Coffindaffer, et al
44	A.H. Reed, et al
45	Edwin Gaston, et al
52	W.D. Hitt, et al
54	Pearle A. Norris, et al
55	J.S. Norris, et al
58	Robert W. Coffindaffer, et al

Tag	Bearing	Dist.	Description
L1	N 42°53' W	1,552.4'	#47-041-05262
L2	N 21°41' E	676.4'	1/2" Rebar
L3	N 67°29' E	1,597.9'	1" Iron pipe
L4	S 34°25' E	1,992.8'	5/8" Rebar
L5	S 84°03' W	1,866.2'	Landing point

Wellhead Layout (NTS)



Well Location References Not to Scale		Legend	
	Proposed gas well		Well Reference, as noted
	Monument, as noted		Existing Well, as noted
	Digitized Well, as noted		Creek or Drain
	Existing Road		Surface boundary (approx.)
	Interior surface tracts (approx.)		

FILE NO: 156-36-12-U-F-19
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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: May 14 2021
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API WELL NO
47 - 041 - 05710
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1,332.2' WATERSHED: Middle West Fork Creek

QUADRANGLE: Btm: Big Isaac
Top: Weston
COUNTY: Lewis 06/04/2021

DISTRICT: Freemans Creek
SURFACE OWNER: H.G. Energy II Appalachia, LLC
ROYALTY OWNER: W.D. Hitt, et al, et al

ACREAGE: 70.00
ACREAGE: 210.00

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
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ADDRESS: 5260 Dupont Road
Parkersburg, WV 26101

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



Detail 1 (Scale 1"=500')



Detail 2 (Scale 1"=500')



Lewis Co. - Freeman Creek Dist.				
No.	TM / Par	Owner	Bk / Pg	Ac.
1	6C / 47	HG Energy II Appalachia, LLC	753 / 453	70.00
2	6C / 43	Gary Allen Sias	646 / 688	50.59
3	6C / 25.1	William Radtka & Helen Burton	655 / 681	5.85
4	6C / 25	Robert M. Painter	629 / 411	27.48
5	6C / 23.2	Michael & Laura Phillips	661 / 298	21.32
6	6C / 23.4	Richard G. Hayhurst, et ux	565 / 326	4.13
7	6C / 23.10	Gary Farris	700 / 769	0.65
8	6C / 23.6	Gary Farris	700 / 769	2.02
9	6C / 21	Thomas R. Zinn, et al	445 / 493	166.25
10	6C / 23.5	Larry Jarrett & Michelle Casey	661 / 455	1.53
11	6C / 23.7	Gary C. & Brenda J. Maki	671 / 327	2.40
12	6C / 23.3	Richard G. Hayhurst, et ux	566 / 470	19.37
13	6C / 22	Mann Family Trust	617 / 608	265.19
14	6C / 58	Mann Family Trust	617 / 608	7.62
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16	6C / 22.2	Stephen & Wendy Mann	718 / 175	5.97
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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: May 14 2021
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API WELL NO
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STATE COUNTY PERMIT

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



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

May 25, 2021

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

RECEIVED
Office of Oil and Gas
MAY 27 2021
WV Department of
Environmental Protection

RE: Flesher 1212 N-1H Request for Permit Revision – (47-041-05710)
Freemans Creek District, Lewis County, West Virginia
Request for Modification Due to Changes to the BHL/LP

Dear Ms. Kees -

Per our discussions, enclosed are revised forms (survey plat, mylar, WW-6B, casing schematic and AOR) for the requested 1212 N-1H well work permit revision. Also included is a check to cover the cost of requesting a modification for an existing permit. We ask the permit be modified to reflect changes in the LP and BHL locations.

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: Sam Ward – DEP State Inspector

06/04/2021