



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, June 22, 2022
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for FOLGER UNIT 1H
47-095-02783-00-00

Extended Lateral Length

ANTERO RESOURCES CORPORATION

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.

James A. Martin
Chief



Operator's Well Number: FOLGER UNIT 1H
Farm Name: ELDON J & RUTH A HELMAN
U.S. WELL NUMBER: 47-095-02783-00-00
Horizontal 6A New Drill
Date Modification Issued: 6/22/2022

Promoting a healthy environment.

06/24/2022

WW-6B
(04/15)

API NO. 47-095 - 02783
OPERATOR WELL NO. Folger Unit 1H MOD
Well Pad Name: Eldon Pad

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

1) Well Operator: Antero Resources Corporation 494507062 095 - Tyler Ellsworth Middlebourne 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Folger Unit 1H MOD Well Pad Name: Eldon Pad

3) Farm Name/Surface Owner: Eldon J. & Ruth A Helman Public Road Access: Allen Run Rd

4) Elevation, current ground: 880' as built Elevation, proposed post-construction: _____

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

(b) If Gas Shallow _____ Deep _____
Horizontal _____

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 6400' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 6400' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 24000'

11) Proposed Horizontal Leg Length: 15147'

12) Approximate Fresh Water Strata Depths: 156'

13) Method to Determine Fresh Water Depths: 47095009120000 Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 1676'

15) Approximate Coal Seam Depths: None Anticipated

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

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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Office of Oil and Gas
JUN 06 2022

WV Department of
Environmental Protection

DMG 6-3-22

WW-6B
(04/15)

API NO. 47- 095 - 02783
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18)

CASING AND TUBING PROGRAM

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	20"	New	H-40	79#	80'	80'	CTS, 77 Cu. Ft.
Fresh Water	13-3/8"	New	J/K-55	54.5#	300'	300'	CTS, 313Cu. Ft.
Coal	9-5/8"	New	J-/K55	36#	2500'	2500'	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110CY	20#	24000'	24000'	CTS, 5120 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

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	20"	24"	0.375"	2250	50	Class A	~1.18
Fresh Water	13-3/8"	17-1/2"	0.38"	2730	1000	Class A	~1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	1500	Class A	~1.18
Intermediate							
Production	5-1/2"	8-3/4" & 8-1/2"	0.415"	14,360	2500	Class G/H	~1.8
Tubing	2-3/8"	4.778"	0.19"	11,200			
Liners							

PACKERS

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			

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06/24/2022

DM 6-3-22

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

Drill a new horizontal shallow well into the Marcellus Shale.

*Antero will be air drilling the fresh water string which makes it difficult to determine when fresh water is encountered. Therefore, we have built in a buffer for the casing setting depth which helps to ensure that all fresh water zones are covered.

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

Antero plans to pump Slickwater into the Marcellus Shale formation in order to ready the well for production. The fluid will be comprised of approximately 99 percent water and sand, with less than 1 percent special-purpose additives as shown in the attached "List of Anticipated Additives Used for Fracturing or Stimulating Well."

Anticipated Max Pressure - 9300 lbs
Anticipated Max Rate - 80 bpm

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 35.04 acres

22) Area to be disturbed for well pad only, less access road (acres): 12.65 acres

23) Describe centralizer placement for each casing string:

Conductor: no centralizers

Surface Casing: one centralizer 10' above the float shoe, one on the insert float collar and one every 4th joint spaced up the hole to surface.

Intermediate Casing: one centralizer above float joint, one centralizer 5' above float collar and one every 4th collar to surface.

Production Casing: one centralizer at shoe joint and one every 3 joints to top of cement in Intermediate casing.

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

Conductor: no additives, Class A cement.

Surface: Class A cement with 2-3% calcium chloride and 1/4 lb of flake

Intermediate: Class A cement with 1/4 lb of flake, 5 gallons of clay treat

Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51

Production: Tail cement- Class H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

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25) Proposed borehole conditioning procedures:

Conductor: blowhole clean with air, run casing, 10 bbls fresh water.

Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.

Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.

Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump high viscosity sweep, trip to base of curve, pump high viscosity sweep, trip to top of curve, trip to bottom, circulate, pump high viscosity sweep, trip out, run casing, circulate 10 bbls fresh water, pump 48 bbls barite pill, pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

WV Department of
Environmental Protection

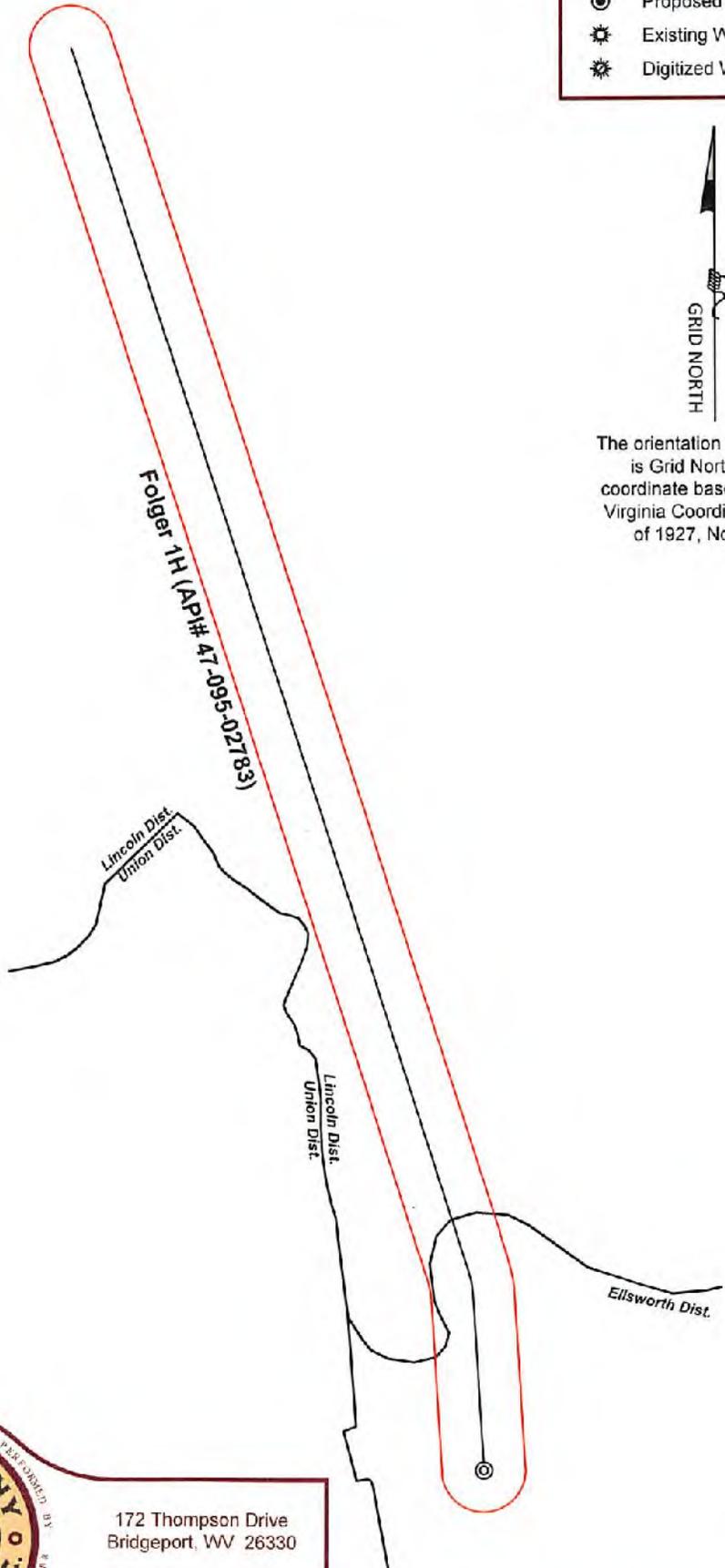
*Note: Attach additional sheets as needed.

LEGEND

- ⊙ Proposed gas well
- ⊛ Existing Well, as noted
- ⊛ Digitized Well, as noted



The orientation of this survey is Grid North, and its coordinate base is the West Virginia Coordinate System of 1927, North Zone



Bridgeport Office
 Phone: (304) 848-5035
 Fax: (304) 848-5037

172 Thompson Drive
 Bridgeport, WV 26330

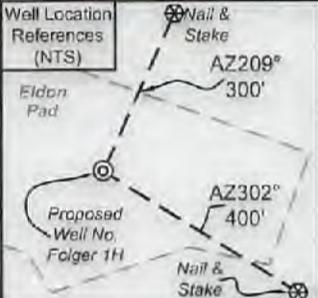
PARTY CHIEF: C. Lynch	DRAWN BY: J. Smith
RESEARCH: J. Miller	PREPARED: April 22, 2022
SURVEYED: Dec. 2016	PROJECT NO: 02-64-U-20
FIELD CREW: C.L., K.M.	DRAWING NO: Folger 1H Well Exhibit



Scale: 1 inch = 2000 feet

06/24/2022

Antero Resources
Well No. Folger 1H
BHL MOD
 Antero Resources Corporation

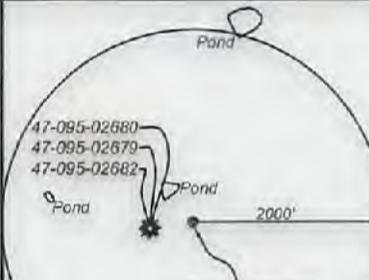


I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

Bradley D. Miller, P.S. 2167



SEAL



Proposed Well No. Folger Unit 1H

Note: 0 water well, 0 spring and 3 ponds were found within 2000' 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.

	Bearing	Dist.
L1	S 10°17' E	869.7'
L2	N 45°25' E	1,115.2'
L3	S 67°56' E	1,174.1'
L4	N 71°46' E	1,866.1'
L5	N 05°16' W	2,550.3'

24" BO FC

8" WO FC

Proposed Well No. Folger Unit 1H

11,092' to Top Hole

4,501' to Bottom Hole

BTM Hole 7.5' Spot

TOP HOLE LATITUDE 39 - 30 - 00
 BTM HOLE LATITUDE 39 - 32 - 30

Notes

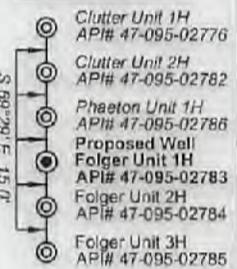
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Folger Unit 1H Top Hole coordinates are
 N: 365,210.12' Latitude: 39°29'36.87"
 E: 1,589,124.19' Longitude: 80°57'21.49"
 Bottom Hole coordinates are
 N: 382,162.87' Latitude: 39°32'23.62"
 E: 1,584,230.67' Longitude: 80°58'27.46"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates: Bottom Hole Coordinates
 N: 4,371,560.906m N: 4,376,700.736m
 E: 503,800.543m E: 502,223.592m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

646' to Bottom Hole
 2,340' to Top Hole
 TOP HOLE LONGITUDE 80 - 55 - 00
 BTM HOLE LONGITUDE 80 - 57 - 30

Notes:

Well No. Folger Unit 1H UTM Zone 17, NAD 1927
 Top Hole Coordinates
 N: 14,341,649.05'
 E: 1,652,838.13'
 Point of Entry Coordinates
 N: 14,344,183.51'
 E: 1,652,562.00'
 Bottom Hole Coordinates
 N: 14,358,511.96'
 E: 1,647,664.04'

Wellhead Layout (NTS)



Legend

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

FILE NO: 02-54-U-20
 DRAWING NO: Folger Unit 1H Well Plat
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

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

DATE: May 18 20 22
 OPERATOR'S WELL NO. Folger Unit 1H
 API WELL NO. 47 - 095 - 02783
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 880' WATERSHED: Outlet Middle Island Creek QUADRANGLE: TH:Middlebourne BH:Paden City

DISTRICT: Lincoln Ellsworth SURFACE OWNER: Ruth A. Helman COUNTY: Tyler 06/24/2022

ROYALTY OWNER: Eldon J. & Ruth A. Helman; Larry A. Wells, et ux; George C. Riddle, et ux; Myrtle Liva Tucker; Donald J. Berry; Timothy B. Ingram; William P. Ingram; Karen Moore Hwika; William P. Ingram, et ux; William Michael Wells, et ux. ACREAGE: 61.83

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

ESTIMATED DEPTH: 6,400' TVD

TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 24,000' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System

ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road

Denver, CO 80202 Charleston, WV 25313



ID	TM/Par	Owner	Bk/Pg	Acres
1	19-1	Eldon J. & Ruth A. Helman	383/761	61.83
2	19-42	Carol J. Cox	334/298	142.00
3	13-10	Eldon J. & Ruth A. Helman	383/761	96.82
4	6-1.1	Eldon J. & Ruth A. Helman	383/761	21.00
5	15-18	B.F. Kile	174/412	70.00
6	15-19	Bennie H. & Karen Kile	263/40	1.00
7	15-15	Jack B. & Bennie H. Kile, Jr.	155/195	39.64
8	15-14	Larry Kile & Christopher Kile	15/647	1.52
9	15-15.2	Ridgetop Capital, LP	375/206	17.54
10	15-12	Roger & Claudia Weekly	317/317	7.66
11	15-10	Doris E. Haught	364/544	55.71
12	15-10.1	Stephen A., Jr. & Tina L. Goudy	323/352	0.50
13	15-11	Stephen A., Jr. & Tina L. Goudy	304/387	0.46
14	15-10.2	April A. & Christopher D. Ramsey	364/541	4.67
15	15-7.2	John P. Litten	500/466	8.90
16	15-7.1	John Preston Litten	391/769	56.00
17	15-7	Ivan W. & Karen L. Makely	281/498	35.10
18	15-6	Ivan Wesley & Karen Leila Makely	234/517	0.40
19	15-5	Ivan & Karen Makely	358/145	0.71
20	15-4	Ivan W. & Karen L. Makely	337/639	41.29
21	15-4.1	Ivan W. & Karen L. Makely	404/130	12.00
22	15-2	Stephen E. Surface, et al	365/302	54.00
23	12-55.1	Nathaniel V. & Tamela Frum	428/604	75.00
24	12-50	William P. Ingram	605/159	88.00
25	12-43	Estella J. & William J. Goodfellow, Jr.	178/489	43.16
26	12-47	Estella & William J. Goodfellow, Jr.	166/356	3.46
27	12-48.1	Estella & William J. Goodfellow, Jr.	333/223	1.91
28	12-48	William Michael & Mary Ann Wells	314/416	34.62
29	12-45	Timothy B. Ingram	326/353	56.35
30	12-44	William P. Ingram	455/477	62.50
31	12-25	Kenneth W. Hammond	363/204	0.75
32	12-24.1	Devan L. Derby & Mallory Hammond	431/752	1.10
33	12-24	Timothy Ingram	335/637	4.90
34	12-23	Timothy Ingram	335/637	6.00
35	12-22	William & Joanne Ingram	140/502	84.30
36	12-26	Kenneth W. Hammond	393/592	41.25
37	12-3	Carl W. & Wanda L. Lemley	175/179	13.50
38	12-2	George C. & Stephanie D. Riddle	334/543	8.80
39	7-40	Brett Grimm, et al	342/538	86.60
40	12-1.1	Mark E. & Jacqueline M. Heintzman	267/303	2.68
41	12-1	Ralph E. & Constance L. Heintzman	167/419	20.60

Leases	
A	Eldon J. & Ruth A. Helman
B	Carol J. Cox
C	Ruth H. Wells
D	Norma R. Spencer
E	WVDNR
F	Benjamin Michael Kile
G	Mary Ann Devine
H	Ivan W. Makely, et ux
I	Karen Moore Hwilka
J	William P. Ingram, et ux
K	William J. Goodfellow, et ux
L	William Michael Wells, et ux
M	Timothy B. Ingram
N	Myrtle Liva Tucker
O	Donald J. Berry
P	William P. Ingram
Q	Timothy B. Ingram
R	Beverly J. Lamp
S	Larry A. Wells, et ux
T	George C. Riddle, et ux
U	Erik D. Grimm

FILE NO: 02-54-U-20
 DRAWING NO: Folger Unit 1H Well Plat
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY:
 Submeter
 PROVEN SOURCE OF ELEVATION:
 WVDOT, Harrisville, WV

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

DATE: May 18 2022
 OPERATOR'S WELL NO. Folger Unit 1H
 API WELL NO. **WVD**
 47 - 095 - 02783
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 880' WATERSHED: Middle Island Creek QUADRANGLE: BH: Paden City
 DISTRICT: Lincoln Eldon J. & Ruth A. Helman Larry A. Wells, et ux; George C. Riddle, et ux; COUNTY: Tyler **06/24/2022**
 SURFACE OWNER: Myrtle Liva Tucker; Donald J. Berry; Timothy B. Ingram; William P. Ingram; ACREAGE: 61.83
Karen Moore Hwilka; William P. Ingram, et ux; William Michael Wells, et ux; 406.69; 100.0; 88;

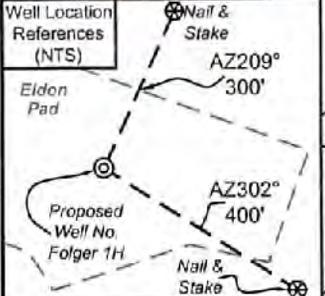
ROYALTY OWNER: Eldon J. & Ruth A. Helman; Ruth H. Wells; WVDNR; Mary Ann Devine. LEASE NO: ACREAGE: 177.67900
 34.625; 62.5; 1.1;
 12.88; 84.3; 8.80;

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 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD

PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,400' TVD
24,000' MD

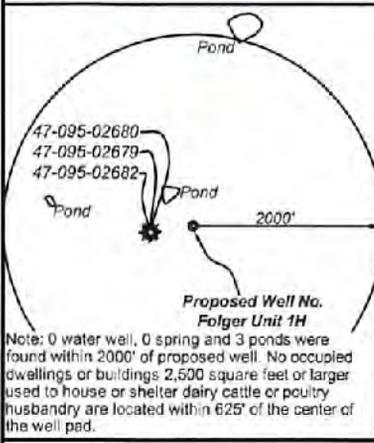
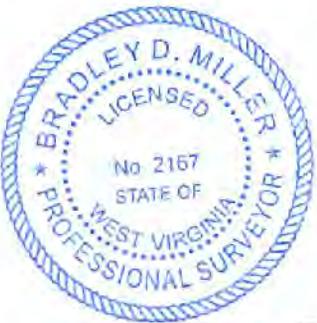
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BHL MOD**
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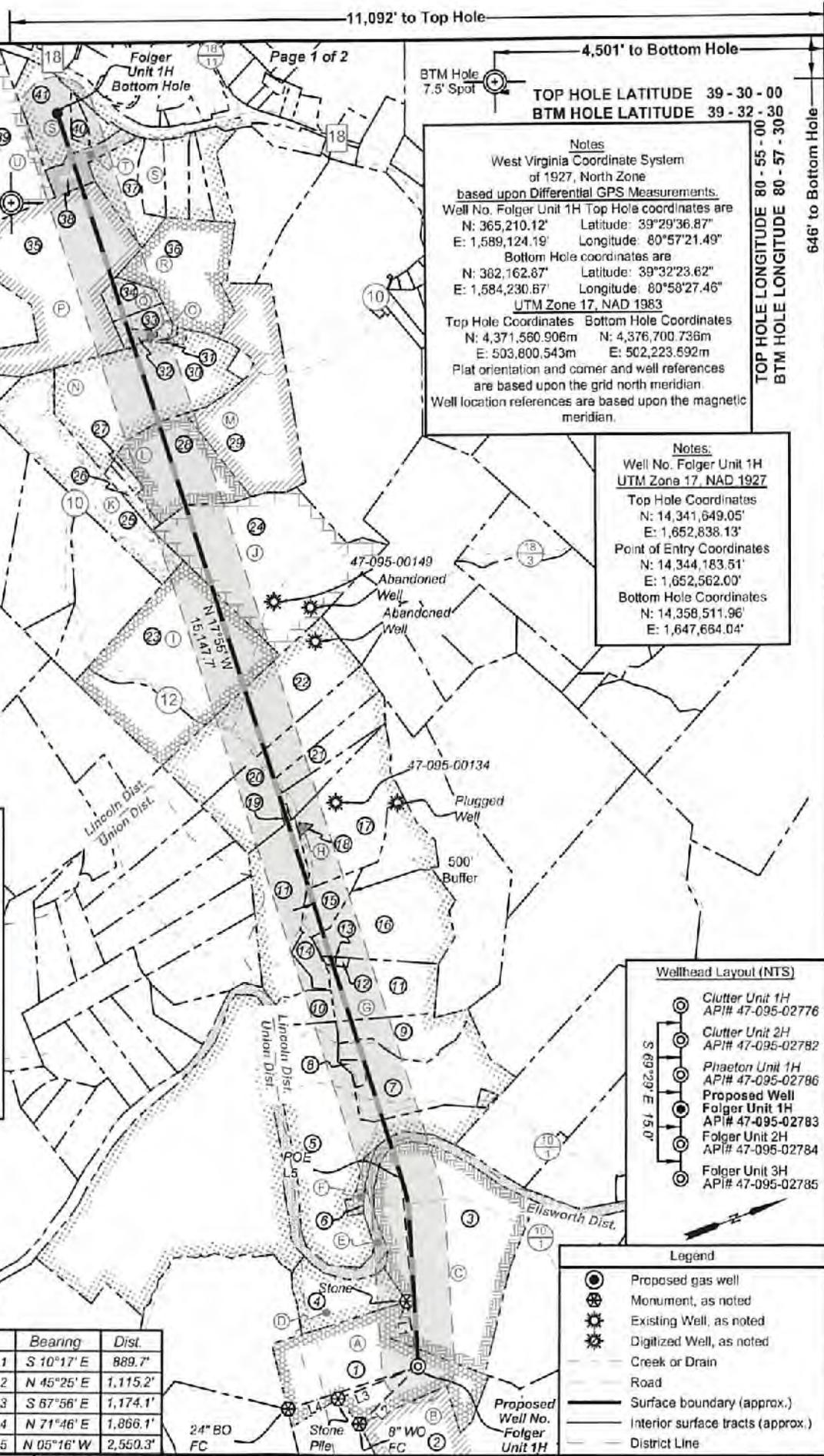


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Bradley D. Miller
Bradley D. Miller, P.S. 2167



	Bearing	Dist.
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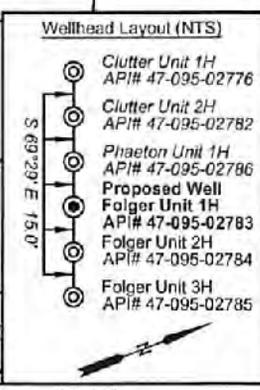
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14	15-10.2	April A. & Christopher D. Ramsey	364/541	4.67
15	15-7.2	John P. Litten	500/466	8.90
16	15-7.1	John Preston Litten	391/769	56.00
17	15-7	Ivan W. & Karen L. Makely	281/498	35.10
18	15-6	Ivan Wesley & Karen Leila Makely	234/517	0.40
19	15-5	Ivan & Karen Makely	358/145	0.71
20	15-4	Ivan W. & Karen L. Makely	337/639	41.29
21	15-4.1	Ivan W. & Karen L. Makely	404/130	12.00
22	15-2	Stephen E. Surface, et al	365/302	54.00
23	12-55.1	Nathaniel V. & Tamela Frum	428/604	75.00
24	12-50	William P. Ingram	605/159	88.00
25	12-43	Estella J. & William J. Goodfellow, Jr.	178/489	43.18
26	12-47	Estella & William J. Goodfellow, Jr.	166/356	3.46
27	12-48.1	Estella & William J. Goodfellow, Jr.	333/223	1.91
28	12-48	William Michael & Mary Ann Wells	314/416	34.62
29	12-45	Timothy B. Ingram	326/353	56.35
30	12-44	William P. Ingram	455/477	62.50
31	12-25	Kenneth W. Hammond	363/204	0.75
32	12-24.1	Devan L. Derby & Mallory Hammond	431/752	1.10
33	12-24	Timothy Ingram	335/837	4.90
34	12-23	Timothy Ingram	335/837	6.00
35	12-22	William & Joanne Ingram	140/502	84.30
36	12-26	Kenneth W. Hammond	393/592	41.25
37	12-3	Carl W. & Wanda L. Lemley	175/179	13.50
38	12-2	George C. & Stephanie D. Riddle	334/543	8.80
39	7-40	Brett Grimm, et al	342/538	86.60
40	12-1.1	Mark E. & Jacqueline M. Heintzman	287/303	2.68
41	12-1	Ralph E. & Constance L. Heintzman	167/419	20.60

Leases	
A	Eldon J. & Ruth A. Helman
B	Carol J. Cox
C	Ruth H. Wells
D	Norma R. Spencer
E	WVDNR
F	Benjamin Michael Kile
G	Mary Ann Devine
H	Ivan W. Makely, et ux
I	Karen Moore Hwikka
J	William P. Ingram, et ux
K	William J. Goodfellow, et ux
L	William Michael Wells, et ux
M	Timothy B. Ingram
N	Myrtle Liva Tucker
O	Donald J. Berry
P	William P. Ingram
Q	Timothy B. Ingram
R	Beverly J. Lamp
S	Larry A. Wells, et ux
T	George C. Riddle, et ux
U	Erik D. Grimm

FILE NO: 02-54-U-20
 DRAWING NO: Folger Unit 1H Well Plat
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY:
Submeter
 PROVEN SOURCE OF ELEVATION:
WVDOT, Harrisville, WV


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

DATE: May 18 2022
 OPERATOR'S WELL NO. Folger Unit 1H
 API WELL NO
47 - 095 - 02783
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 880' WATERSHED: Middle Island Creek QUADRANGLE: BH: Paden City
 DISTRICT: Lincoln Ellsworth COUNTY: Tyler
 SURFACE OWNER: Eldon J. & Ruth A. Helman Larry A. Wells, et ux; George C. Riddle, et ux; Myrtle Liva Tucker; Donald J. Berry; Timothy B. Ingram; William P. Ingram;
Karen Moore Hwikka; William P. Ingram, et ux; William Michael Wells, et ux; ACREAGE: 61.83
 ROYALTY OWNER: Eldon J. & Ruth A. Helman; Ruth H. Wells; WVDNR; Mary Ann Devine; LEASE NO: _____ ACREAGE: 177.67900
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,400' TVD
24,000' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
Denver, CO 80202 Charleston, WV 25313

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:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
A: <u>Eldon J. & Ruth A. Helman Lease</u> Eldon J. Helman, et ux	Antero Resources Corporation	1/8+	0427/0610
C: <u>Ruth H Wells Lease</u> Ruth H Wells Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	417/706 557/430
E: <u>WVDNR Lease</u> WVDNR	Antero Resources Corporation	1/8+	175/713
G: <u>Mary Ann Devine Lease</u> Mary Ann Devine	Antero Resources Corporation	1/8+	21/88
I: <u>Karen Moore Hwilka Lease</u> Karen Moore Hwilka	Antero Resources Corporation	1/8+	140/773
J: <u>William P Ingram et ux Lease</u> William P Ingram et ux	Antero Resources Corporation	1/8+	148/145
L: <u>William Michael Wells et ux</u> William Michael Wells et ux	Antero Resources Corporation	1/8+	148/173
N: <u>Myrtle Liva Tucker Lease</u> Myrtle Liva Tucker	Antero Resources Corporation	1/8+	148/170
O: <u>Donald J Berry Lease</u> Donald J Berry	Antero Resources Corporation	1/8+	155/344
Q: <u>Timothy B Ingram Lease</u> Timothy B Ingram	Antero Resources Corporation	1/8+	148/156
P: <u>William P Ingram Lease</u> William P Ingram	Antero Resources Corporation	1/8+	148/145
T: <u>George C Riddle et ux Lease</u> George C Riddle et ux	Antero Resources Corporation	1/8+	616/556

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
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***Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.**

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
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- (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
<u>S: Larry A Wells et ux Lease</u>	Larry A Wells et ux	Antero Resources Corporation	1/8+	136/61

Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

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

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

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

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

Well Operator: Antero Resources Corporation
 By: Tim Rady
 Its: Senior VP of Land