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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Friday, February 7, 2020  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION  
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for MAGGIE UNIT 1H  
47-095-02637-00-00

**Modified Lateral**

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: MAGGIE UNIT 1H  
Farm Name: BARBARA KAY TURNER  
U.S. WELL NUMBER: 47-095-02637-00-00  
Horizontal 6A New Drill  
Date Modification Issued: February 7, 2020

Promoting a healthy environment.

WW-6B  
(04/15)

API NO. 47-095 - 02637

OPERATOR WELL NO. Maggie Unit 1H

Well Pad Name: Gamehenge East Pad

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

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

2) Operator's Well Number: Maggie Unit 1H Well Pad Name: Gamehenge East Pad

3) Farm Name/Surface Owner: Barbara Kay Turner Public Road Access: State Ridge Road

4) Elevation, current ground: 1072' Elevation, proposed post-construction: ~1061'

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

Other

(b) If Gas Shallow X Deep

Horizontal X

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):  
Marcellus Shale: 7000' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2850#

8) Proposed Total Vertical Depth: 7000' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 23700' MD

11) Proposed Horizontal Leg Length: 15824'

12) Approximate Fresh Water Strata Depths: 363'

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

14) Approximate Saltwater Depths: 1093'

15) Approximate Coal Seam Depths: 550'

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 X

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

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WW-6B  
(04/15)

API NO. 47- 095 - 02637

OPERATOR WELL NO. Maggie Unit 1H

Well Pad Name: Gamehenge East Pad

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	94#	80	80	CTS, 77 Cu. Ft.
Fresh Water	13-3/8"	New	J-55	54.5#	413 *see # 19	413 *see # 19	CTS, 574 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500	2500	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	23#	23700	23700	6109 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"	0.438"	1530	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"	12,630	2500	Lead-H/POZ & Tail - H	H/POZ-1.44 & 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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WW-6B  
(10/14)

API NO. 47- 095 - 02637  
OPERATOR WELL NO. Maggie Unit 1H  
Well Pad Name: Gamehenge East Pad

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

Drill, perforate, fracture a new horizontal shallow well and complete 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): 7.45 acres

22) Area to be disturbed for well pad only, less access road (acres): 7.45 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.

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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

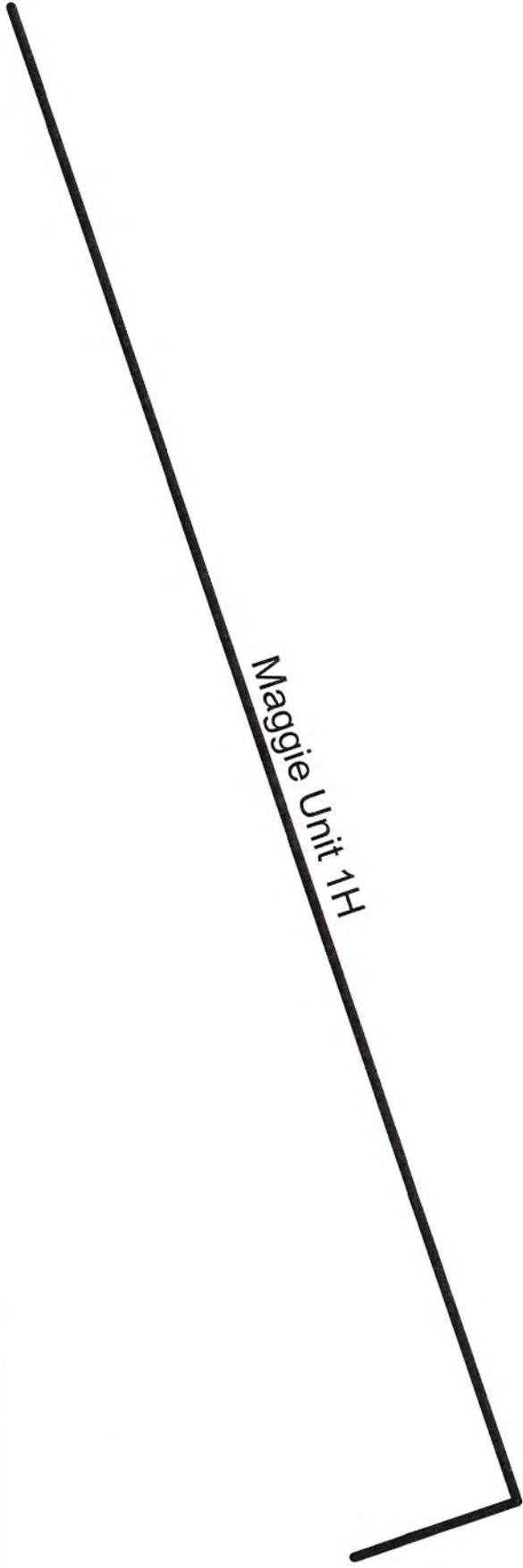
25) Proposed borehole conditioning procedures:

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.

\*Note: Attach additional sheets as needed.



PERMIT MODIFICATION API # 47-095-02637



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Antero Resources Corporation

Maggie Unit 1H



REMARKS  
No Wells of Interest

December 17, 2018

WW-6A1  
(5/13)

Operator's Well No. Maggie Unit 1H

**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
<u>Bounty Minerals Lease</u>	Bounty Minerals	Antero Resources Corporation	1/8+	0623/0575

\*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.

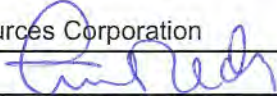
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WV Department of  
Environmental Protection

**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: VP of Land

WW-6A1

Operator's Well Number Maggie Unit 1H

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<b><u>Linda L. Newbrough Lease (TM 15 PCL 18)</u></b>			
Linda L. Newbrough	Chesapeake Appalachia, LLC	1/8	0373/0234
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties, Inc	Assignment	0376/0733
Statoil USA Onshore Properties, Inc	EQT Production Company	Assignment	0539/0239
EQT Production Company	Antero Resources Corporation	Assignment	0663/0001
<b><u>Jack Russell Folger, et ux Lease</u></b>			
Jack Russell Folger, et ux	Antero Resources Corporation	1/8+	0495/0097
<b><u>Linda L. Newbrough Lease (TM 14 PCL 58)</u></b>			
Linda L. Newbrough	Chesapeake Appalachia, LLC	1/8	0373/0234
Chesapeake Appalachia, LLC	Statoil USA Onshore Properties, Inc	Assignment	0376/0733
Statoil USA Onshore Properties, Inc	EQT Production Company	Assignment	0539/0239
EQT Production Company	Antero Resources Corporation	Assignment	0663/0001
<b><u>Stanley M. Koterba &amp; Irene E. Koterba Lease</u></b>			
Stanley M. Koterba & Irene E. Koterba	Antero Resources Corporation	1/8+	0597/0497
<b><u>Sarah Valentour Nass Lease</u></b>			
Sarah Valentour Nass	Antero Resources Corporation	1/8+	0555/0116
<b><u>Larry R. Henthorn &amp; Kim M. Henthorn Lease</u></b>			
Larry R. Henthorn & Kim M. Henthorn	Antero Resources Corporation	1/8+	0570/0426
<b><u>Rosemary Haught Lease</u></b>			
Rosemary Haught	Antero Resources Corporation	1/8+	0459/0179
<b><u>Phyllis M. &amp; James F. Henthorn Sr. Lease (TM 9 PCL 60)</u></b>			
Phyllis M. & James F. Henthorn Sr.	Antero Resources Corporation	1/8+	0621/0042
<b><u>Phyllis M. &amp; James F. Henthorn Sr. Lease (TM 9 PCL 59)</u></b>			
Phyllis M. & James F. Henthorn Sr.	Antero Resources Corporation	1/8+	0621/0042
<b><u>Larry R. Henthorn et ux Lease</u></b>			
Larry R. Henthorn et ux	Antero Resources Corporation	1/8+	0570/0426

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 11-19-2019  
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 Environmental Protection

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\*\*CONTINUED ON NEXT PAGE\*\*

95-02637 uod

WW-6A1

Operator's Well Number Maggie Unit 1H

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Chapter 22, Article 6A, Section 5(a)(5)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

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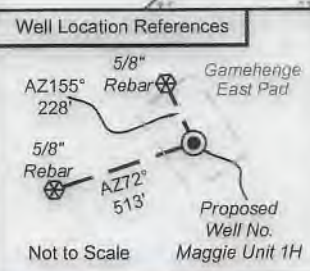
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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Michael P. Tuttle &amp; Sherri J. Tuttle Lease</u> Michael P. Tuttle & Sherri J. Tuttle	Antero Resources Corporation	1/8+	0570/0426
<u>Roger Ankrom Lease</u> Roger Ankrom	Antero Resources Corporation	1/8+	0541/0554
<u>Thomas Skinner Lease</u> Thomas Skinner	Antero Resources Corporation	1/8+	0515/0179
<u>Waco Oil &amp; Gas Inc. Lease</u> Waco Oil & Gas Inc.	Antero Resources Corporation	1/8+	0518/0587
<u>Nancy Squires Lease</u> Nancy Squires	Antero Resources Corporation	1/8+	0541/0695
<u>Charles Ferrell Lease</u> Charles Ferrell	Antero Resources Corporation	1/8+	0526/0064
<u>H3 LLC Lease</u> H3 LLC	Antero Resources Corporation	1/8+	0570/0429
<u>David E. Bowyer Lease</u> David E. Bowyer	Antero Resources Corporation	1/8+	0569/0503
<u>Pamela Oakley-Whiting Lease</u> Pamela Oakley-Whiting	Antero Resources Corporation	1/8+	0637/0695
<u>Jefferson Minerals Lease</u> Jefferson Minerals	Antero Resources Corporation	1/8+	0648/0046
<u>Nancy Templeton Lease</u> Nancy Templeton	Antero Resources Corporation	1/8+	0402/0665

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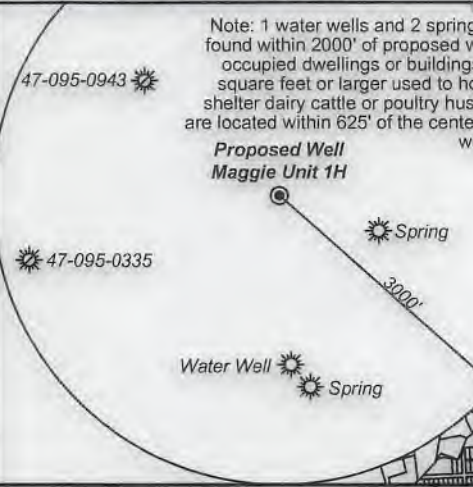


**Antero Resources**  
**Well No. Maggie Unit 1H**  
**BHL MOD**  
**Antero Resources Corporation**



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



FILE NO: 283-54-E-17  
 DRAWING NO: Maggie 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**

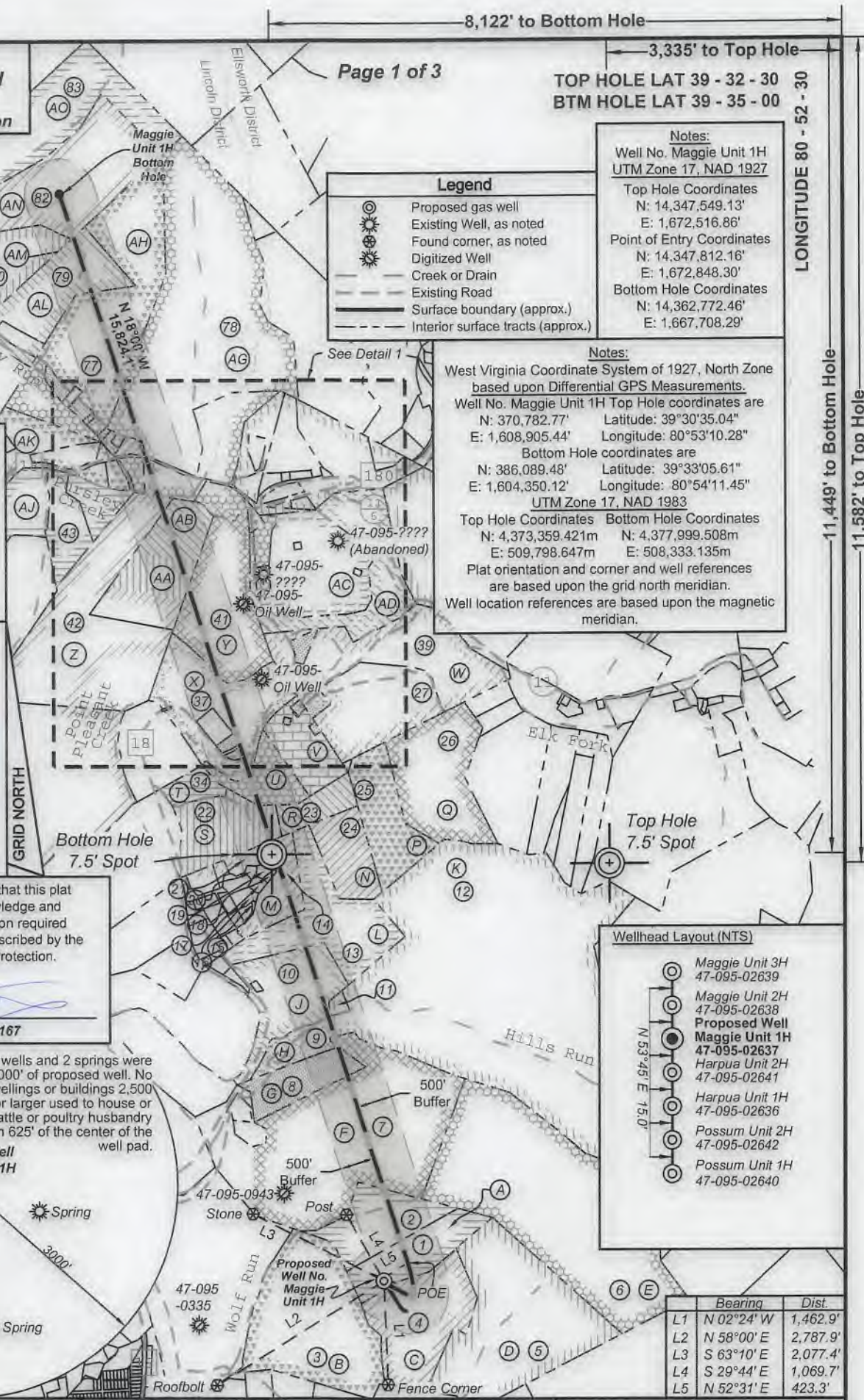
DATE: November 7 2019  
 OPERATOR'S WELL NO. Maggie Unit 1H  
 API WELL NO mod  
 47 - 095 - 02637  
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: Proposed 1061' Existing 1072' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City  
 DISTRICT: Ellsworth / Lincoln COUNTY: Tyler  
 SURFACE OWNER: Barbara Kay Turner ACREAGE: 26.18  
 ROYALTY OWNER: Linda L. Newbrough; Jack Russell Folger, et ux; Stanley M. & Irene K. Koterba; Sarah Valentour Nass LEASE NO: ACREAGE: 33.25; 74.47; 64;

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: 23,700' MD 7,000' TVD

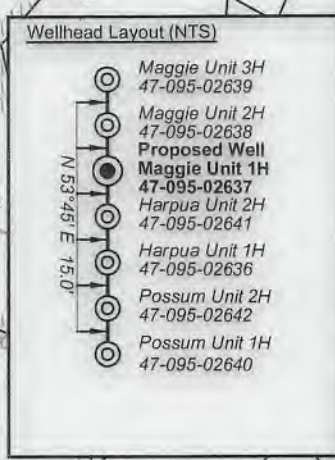
WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313



- Legend**
- Proposed gas well
  - Existing Well, as noted
  - Found corner, as noted
  - Digitized Well
  - Creek or Drain
  - Existing Road
  - Surface boundary (approx.)
  - Interior surface tracts (approx.)

**Notes:**  
 Well No. Maggie Unit 1H  
 UTM Zone 17, NAD 1927  
 Top Hole Coordinates  
 N: 14,347,549.13'  
 E: 1,672,516.86'  
 Point of Entry Coordinates  
 N: 14,347,812.16'  
 E: 1,672,848.30'  
 Bottom Hole Coordinates  
 N: 14,362,772.46'  
 E: 1,667,708.29'

**Notes:**  
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
 Well No. Maggie Unit 1H Top Hole coordinates are  
 N: 370,782.77' Latitude: 39°30'35.04"  
 E: 1,608,905.44' Longitude: 80°53'10.28"  
 Bottom Hole coordinates are  
 N: 386,089.48' Latitude: 39°33'05.61"  
 E: 1,604,350.12' Longitude: 80°54'11.45"  
 UTM Zone 17, NAD 1983  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,373,359.421m N: 4,377,999.508m  
 E: 509,798.647m E: 508,333.135m  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 Well location references are based upon the magnetic meridian.



	Bearing	Dist.
L1	N 02°24' W	1,462.9'
L2	N 58°00' E	2,787.9'
L3	S 63°10' E	2,077.4'
L4	S 29°44' E	1,069.7'
L5	N 52°31' E	423.3'



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 Submeter  
 PROVEN SOURCE OF ELEVATION:  
 WVDOT, Harrisville, WV

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

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 47 - 095 - 02637  
 STATE COUNTY PERMIT

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 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
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 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road  
Denver, CO 80202 Charleston, WV 25313

Lincoln District				Ellsworth District					
ID	TM / Par	Owner(s)	Book / Page	Acreege	ID	TM / Par	Owner(s)	Book / Page	Acreege
67	9 / 41	Roger J. Morgan II	327 / 31	1.40	1	15 / 18	Barbara Kay Turner	398 / 670	26.18
68	9 / 41.2	Rodney L. & Brenda K. Morgan	342 / 121	0.517	2	14 / 26	Barbara Kay Turner	398 / 670	26.34
69	9 / 41.1	Nancy M. Morgan	269 / 629	0.99	3	14 / 27	Ridgetop Capital LP	372 / 299	64.96
70	9 / 39	Nancy M. Morgan	157 / 512	0.42	4	15 / 19	David Mendenhall, et al	282 / 723	45.00
71	9 / 44	Diane W. Clark	WB 39 / 544	40.681	5	15 / 17	Timothy Aiken, et al	288 / 662	85.71
72	9 / 44.1	Rodney L. & Brenda K. Morgan	297 / 137	5.299	6	15 / 37	John D. Mendenhall & Jeffrey A. Davis	444 / 531	154.17
73	9 / 33.3	David Dean & Whitney C. Cooper	438 / 62	12.131	7	14 / 25	Stanley M. Koterba, et al	331 / 32	126.05
74	9 / 37	William Bassett	WB 30 / 15	0.92	8	14 / 11	Larry R. Henthorn	270 / 363	21.50
75	9 / 37.1	Dottie Marie Perrine	WB 30 / 15	0.41	9	9 / 61	Larry R. Henthorn	212 / 606	10.00
76	9 / 38	Charles O. Rice	157 / 293	1.31	10	9 / 60	James F. & Phyllis Henthorn	190 / 311	36.47
77	9 / 33	Jefferson Minerals LLC	438 / 66	69.169	11	10 / 63	Larry R. & Kim M. Henthorn	355 / 654	1.00
78	9 / 34	James Lee & Michael E. Sine	438 / 427	125.60	12	10 / 62	Haessley Land & Timber, LLC	334 / 833	268.91
79	9 / 32	Tracy P. Carr	346 / 487	32.174	13	9 / 59	James F. & Phyllis Henthorn	190 / 311	46.43
80	9 / 31	Russell L. & Mary E. Myers	347 / 263	31.451	14	9 / 49	Claudia Jean Gray	WB 29 / 220	15.15
81	9 / 31.1	Russell L. & Mary E. Myers	340 / 654	38.04	15	9 / 48.2	Kirk Family Trust	511 / 167	0.33
82	9 / 21	Thomas K. Brotherton	23 / 310	64.00	16	9 / 48.4	Francis D. & Barbara Ann Slider	290 / 347	3.64
83	9 / 19	Russell L. & Mary E. Myers	337 / 26	93.167	17	9 / 48.5	Kathleen (Baxter) Fluharty	291 / 212	0.929
					18	9 / 48.3	Larry Ronald Henthorn	290 / 166	0.323
					19	9 / 43	Catherine L. Bennett	217 / 376	0.72
					20	9 / 48.7	Kathleen (Baxter) Fluharty	332 / 216	0.548
					21	9 / 48	Michael D. & Martha K. Pierpoint	332 / 514	2.82
					22	9 / 25	Michael & Sherri Tuttle	319 / 341	24.52
					23	9 / 29	Frank Ankrom	203 / 165	13.30
					24	9 / 44	Mariyn Ankrom & Brady Ankrom	WB 47 / 269	20.00
					25	10 / 29	Robert P. Thomas & Sharon L. Thomas	335 / 366	30.00
					26	10 / 30	Robert P. Thomas & Sharon L. Thomas	335 / 366	35.75
					27	10 / 28.1	Paul William Kirk	355 / 551	38.008
					28	9 / 27	Mariyn Ankrom & Brady Ankrom	WB 47 / 269	17.35
					29	9 / 27.1	Patty Henthorn & Melanie Dye	232 / 688	0.37
					30	9 / 27.2	Herman & Betty Haught	250 / 484	0.23
					31	9 / 26.1	Lazear Chapel Trustees	283 / 523	0.06
					32	9 / 28	Lazear Chapel Methodist	-- / --	2.21
					33	9 / 26	Mariyn Ankrom & Brady Ankrom	WB 47 / 269	18.94
					34	9 / 24	Bob S. & Sue Marie Adams	204 / 599	7.148
					35	9 / 15.1	Thomas Skinner & Marilyn Sure Skinner	226 / 477	0.713
					36	9 / 15.2	Par Mar Realty Company	534 / 407	3.091
					37	9 / 15.3	Fred Midcap	351 / 7	44.00
					38	9 / 22	Shawn Allen & Cathy A. Potts	291 / 217	0.98
					39	10 / 28	John E. Roberts	WB 30 / 142	38.99
					40	9 / 65	Julia A. & Nile A. Archer	340 / 225	3.00
					41	9 / 16	Sara A. Midcap	181 / 278	96.78
					42	9 / 15	Heartwood Forestland Fund II LP	326 / 547	225.64
					43	9 / 2	William & Margaret A. Garrett	284 / 41	22.19
					44	9 / 3.1	Big Run Properties, LLC	569 / 286	2.34
					45	9 / 64	Carol Morgan, et al	262 / 459	0.97
					46	9 / 5.1	John W. Starkey	255 / 571	2.55
					47	9 / 5.2	Ronald Lee Cooper	329 / 471	7.49
					48	9 / 5.3	James M. & Sherry L. Starkey	287 / 381	7.58
					49	9 / 5	Leslie E. Steven, Heirs & Meryl L. Stevens	287 / 381	0.18
					50	9 / 17.1	Julia A. Archer	571 / 671	3.678
					51	9 / 17.2	Julia A. Archer	571 / 671	1.904
					52	9 / 17.3	Friendly Public Service District	363 / 485	0.23
					53	9 / 17	Daniel J. & Rebecca B. Stillwagoner	562 / 565	47.30
					54	9 / 19	John E. Roberts	185 / 263	22.67
					55	9 / 10	James K. & Kristy Fletcher Wade	320 / 231	1.061
					56	9 / 10.1	Kevin Fletcher	320 / 235	0.443
					57	9 / 9	Calvary Apostolic Church Trustees	400 / 573	2.00
					58	9 / 13.3	James R. & Beverly A. Underwood	335 / 266	0.778
					59	9 / 11	James R. & Beverly A. Underwood	359 / 492	0.35
					60	9 / 8	Gary A. & Penny K. Midcap	324 / 542	1.42
					61	9 / 7	Larry & Kim Henthorn	330 / 536	2.52
					62	9 / 13.1	Timothy L. Connie J. McHenry	242 / 681	10.83
					63	9 / 7.1	Donald D. Henthorn & Deitra Kay Moore	309 / 196	2.09
					64	9 / 7.2	Donald D. Henthorn & Deitra Kay Moore	330 / 536	8.00
					65	9 / 4	Donald D. & Deitra Kay Henthorn	330 / 536	0.21
					66	9 / 42	Larry G. & Neoma A. Spratt	310 / 705	24.64

ID	Lease
A	Linda L. Newbrough
B	Naomi V. Beagle
C	Jack Russell Folger, et ux
D	Darla S. Colombo
E	Dianne T. Carpenter
F	Stanley M. Koterba & Irene E. Koterba
G	Sarah Valentour Nass
H	Larry R. Henthorn, et ux
J	Phyllis M. & James F. Henthorn, Sr.
K	Rosemary Haught
L	Phyllis M. & James F. Henthorn, Sr.
M	Larry R. Henthorn, et ux
N	Brandy I. Ankrom
P	J&N Management Enterprises, LLC
Q	Charles F. Eddy
R	Emily Day
S	Michael P. & Sherri J. Tuttle
T	Bobby S. & Sue Marie Adams
U	Roger Ankrom
V	Union Bank Lease
W	John E. Roberts
X	Waco Oil & Gas, Inc.
Y	Nancy J. Squires
Z	David E. Bowyer
AA	Charles M. Ferrell
AB	H3, LLC
AC	Sara Blanche Lilly
AD	Sara Blanche Lilly
AE	Nancy J. Squires
AF	Larry Henthorn
AG	Pamela Oakley-Whiting
AH	Jefferson Minerals, LLC
AI	Roger Morgan
AJ	Kathym L. Watkins
AK	Diane W. Kestle
AL	Nancy Templeton
AM	Michael D. Reynolds
AN	Bounty Minerals, LLC
AO	Timothy L. Vancamp
AP	Lazears Chapel Church, Non-Profit Organization
AQ	Melanie Dye
AR	Herman Haught & Betty Haught, individually & JTWROS
AS	Shaun Potts, et ux
AT	Thomas Skinner
AU	Rodney Morgan, et ux
AV	Nancy Morgan
AW	Kathleen Pierce

FILE NO: 283-54-E-17  
 DRAWING NO: Maggie 1H Well Plat  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY:  
 Submeter  
 PROVEN SOURCE OF ELEVATION:  
 WVDOT, Harrisville, WV



DATE: November 7 2019  
 OPERATOR'S WELL NO. Maggie Unit 1H  
 API WELL NO. **MDD**  
 47 - 095 - 02637  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: Proposed 1061' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City  
 DISTRICT: Ellsworth / Lincoln COUNTY: Tyler  
 SURFACE OWNER: Barbara Kay Turner ACREAGE: 26.18  
 ROYALTY OWNER: Linda L. Newbrough; Jack Russell Folger, et ux; Stanley M. & Irene K. Koterba; Sarah Valentour Nass LEASE NO: ACREAGE: 33.25; 74.47; 64;  
 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: 23,700' 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



December 17, 2019

Antero Resources  
1615 Wynkoop Street  
Denver, CO 80202  
Office 303.357.7310  
Fax 303.357.7315

West Virginia Department of Environmental Protection  
Office of Oil and Gas  
Attn: Ms. Laura Adkins  
601 57<sup>th</sup> Street  
Charleston, WV 25304

Ms. Laura Adkins:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for approved wells on the existing Gamehenge East Pad: Maggie Unit 1H (API # 47-095-02637), Maggie Unit 2H (API # 47-095-02638) & Maggie Unit 3H (API # 47-095-02639).

Attached you will find the following documents:

- REVISED Form WW-6B, which shows the updated POE & Measured Depth
- REVISED Form WW-6A1, which shows the new leases we will be drilling into
- REVISED Mylar Plat, which shows the new Lateral Length & Estimated Measured Depth
- AOR & As-Built Design

If you have any questions please feel free to contact me at (303) 357-7223.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Megan Griffith", written over a white background.

Megan Griffith  
Permitting Agent  
Antero Resources Corporation

Enclosures

RECEIVED  
Office of Oil and Gas

DEC 19 2019

WV Department of  
Environmental Protection