



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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Friday, December 20, 2019
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for FETTY UNIT 2H
47-095-02635-00-00

Modified Lateral Length for a TMD 21,600'.

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: FETTY UNIT 2H
Farm Name: RIDGETOP CAPITAL LP
U.S. WELL NUMBER: 47-095-02635-00-00
Horizontal 6A New Drill
Date Modification Issued: December 20, 2019

Promoting a healthy environment.

WW-6B
(04/15)

PERMIT MODIFICATION API # 47-095-02635 MOD
API NO. 47-095 - 02635 mod
OPERATOR WELL NO. Fetty Unit 2H
Well Pad Name: Gamehenge 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 Paden City 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Fetty Unit 2H Well Pad Name: Gamehenge Pad

3) Farm Name/Surface Owner: Ridgetop Capital, LP Public Road Access: State Ridge Road

4) Elevation, current ground: 1052' Elevation, proposed post-construction: ~1026'

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 Shale: 7000' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 7000' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 21600' MD

11) Proposed Horizontal Leg Length: 11403'

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

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

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Environmental Protection

WW-6B
(04/15)

API NO. 47- 095 - 02635 MOD

OPERATOR WELL NO. Fetty Unit 2H

Well Pad Name: Gamehenge Pad

18)

CASING AND TUBING PROGRAM

TYPE	<u>Size (in)</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling (ft)</u>	<u>INTERVALS: Left in Well (ft)</u>	<u>CEMENT: Fill-up (Cu. Ft.)/CTS</u>
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#	21600	21600	5532 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

TYPE	<u>Size (in)</u>	<u>Wellbore Diameter (in)</u>	<u>Wall Thickness (in)</u>	<u>Burst Pressure (psi)</u>	<u>Anticipated Max. Internal Pressure (psi)</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
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 - 02635 MD
 OPERATOR WELL NO. Fetty Unit 2H
 Well Pad Name: Gamehenge 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): 60.16 acres

22) Area to be disturbed for well pad only, less access road (acres): 11.76 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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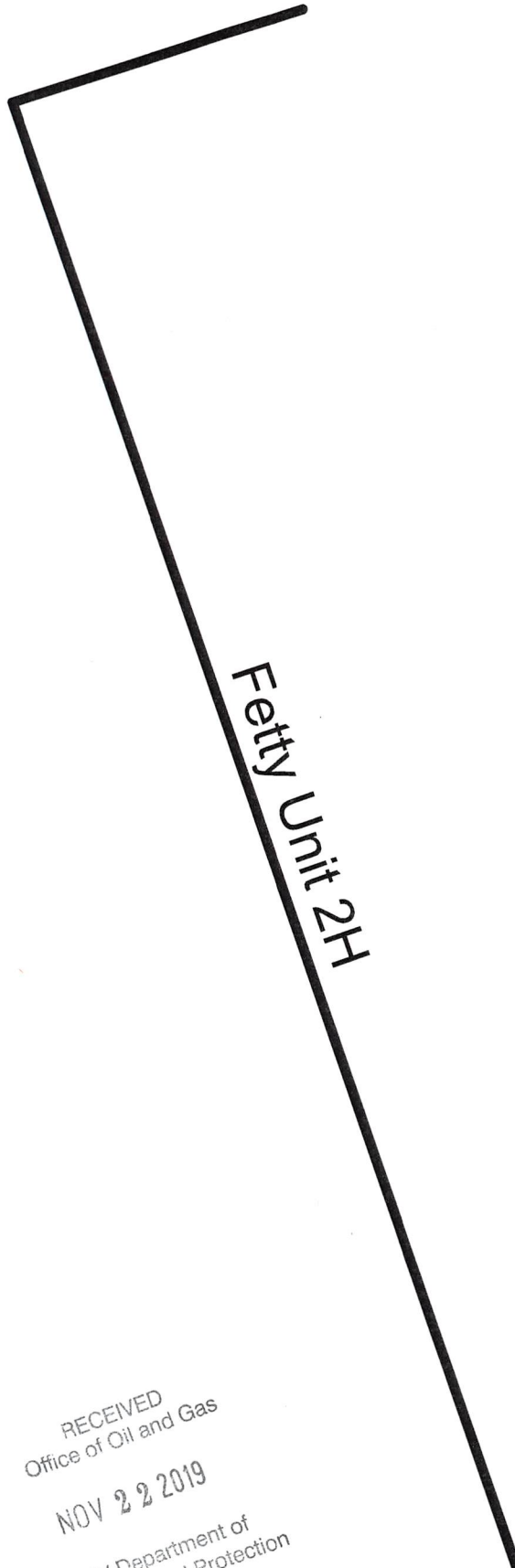
24) Describe all cement additives associated with each cement type:

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.



Antero Resources Corporation

Fetty Unit 2H



- WELL SYMBOLS**
- Dry Hole, With Show of Oil & Gas
 - Location Only
 - Pad Location
 - Plugged Oil Well

REMARKS

No Wells of Interest

December 17, 2018

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WW-6A1
(5/13)

Operator's Well No. Fetty 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
Levi Pelikan Lease

Levi Pelikan	Antero Resources Corporation	1/8+	0646/0092
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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.

**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:

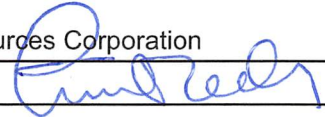
- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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.

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

WW-6A1

Operator's Well Number Fetty Unit 1H

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
<u>Naomi V. Beagle Lease</u> Naomi V. Beagle	Antero Resources Corporation	1/8+	0535/0464
<u>Scott Denomme et ux Lease (TM 14 PCL 1)</u> Scott Denomme et ux	Antero Resources Corporation	1/8+	0535/0187
<u>Scott Denomme et ux Lease (TM 14 PCL 3.1)</u> Scott Denomme et ux	Antero Resources Corporation	1/8+	0535/0187
<u>Scott Denomme et ux Lease (TM 14 PCL 4)</u> Scott Denomme et ux	Antero Resources Corporation	1/8+	0535/0187
<u>Boyd M. & Patricia L. Parr et ux Lease</u> Boyd M. & Patricia L. Parr et ux	Antero Resources Corporation	1/8+	0417/0702
<u>Nathaniel Hendricks Lease</u> Nathaniel Hendricks	Antero Resources Corporation	1/8+	0619/0372
<u>Roger Carl Ferrell Lease</u> Roger Carl Ferrell	Antero Resources Corporation	1/8+	0531/0491
<u>Lisa A. George Lease</u> Lisa A. George	Antero Resources Corporation	1/8+	0436/0416
<u>Robert Glover et ux Lease</u> Robert Glover et ux	Antero Resources Corporation	1/8+	0613/0505
<u>JB Exploration Lease</u> JB Exploration	Antero Resources Corporation	1/8	0672/0105
<u>Neil A. Archer Lease</u> Neil A. Archer	Antero Resources Corporation	1/8+	0544/0423
<u>Phillip Wells et ux Lease</u> Phillip Wells et ux	Antero Resources Corporation	1/8+	0601/0107

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
Charles L. Swan Lease Charles L. Swan	Antero Resources Corporation	1/8+	0545/0114
Timothy J. Fletcher Lease Timothy J. Fletcher	Antero Resources Corporation	1/8+	0544/0358
Janice Licht Lease Janice Licht	Antero Resources Corporation	1/8+	0612/0767
Craig A. Kelley Lease Craig L. Kelley	Antero Resources Corporation	1/8+	0408/0379
Connie L. Hickman Lease Connie L. Hickman Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	0408/0448 Exhibit 1
Richard A. Fonner et ux Lease Richard A. Fonner et ux	Antero Resources Corporation	1/8+	0634/0341
William M. Baker et ux Lease William M. Baker et ux	Antero Resources Corporation	1/8+	0456/0522
Mary A. Hickman Lease (TM 20 PCL 55) Mary A. Hickman Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	0436/0117 Exhibit 1
Mary A. Hickman Lease (TM 20 PCL 56) Mary A. Hickman Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	0408/0311 Exhibit 1
Lance M. Hickman Lease Lance M. Hickman	Antero Resources Corporation	1/8+	0408/0450
Nancy Ann Villers Lease Nancy Ann Villers Antero Resources Appalachian Corporation	Antero Resources Appalachian Corporation Antero Resources Corporation	1/8+ Name Change	0397/0468 0557/0430

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Antero Resources
Well No. Fetty
Unit 2H
 BHL MOD
 Antero Resources Corporation

Page 1 of 3

3,902' to Top Hole

2,198' to Bottom Hole

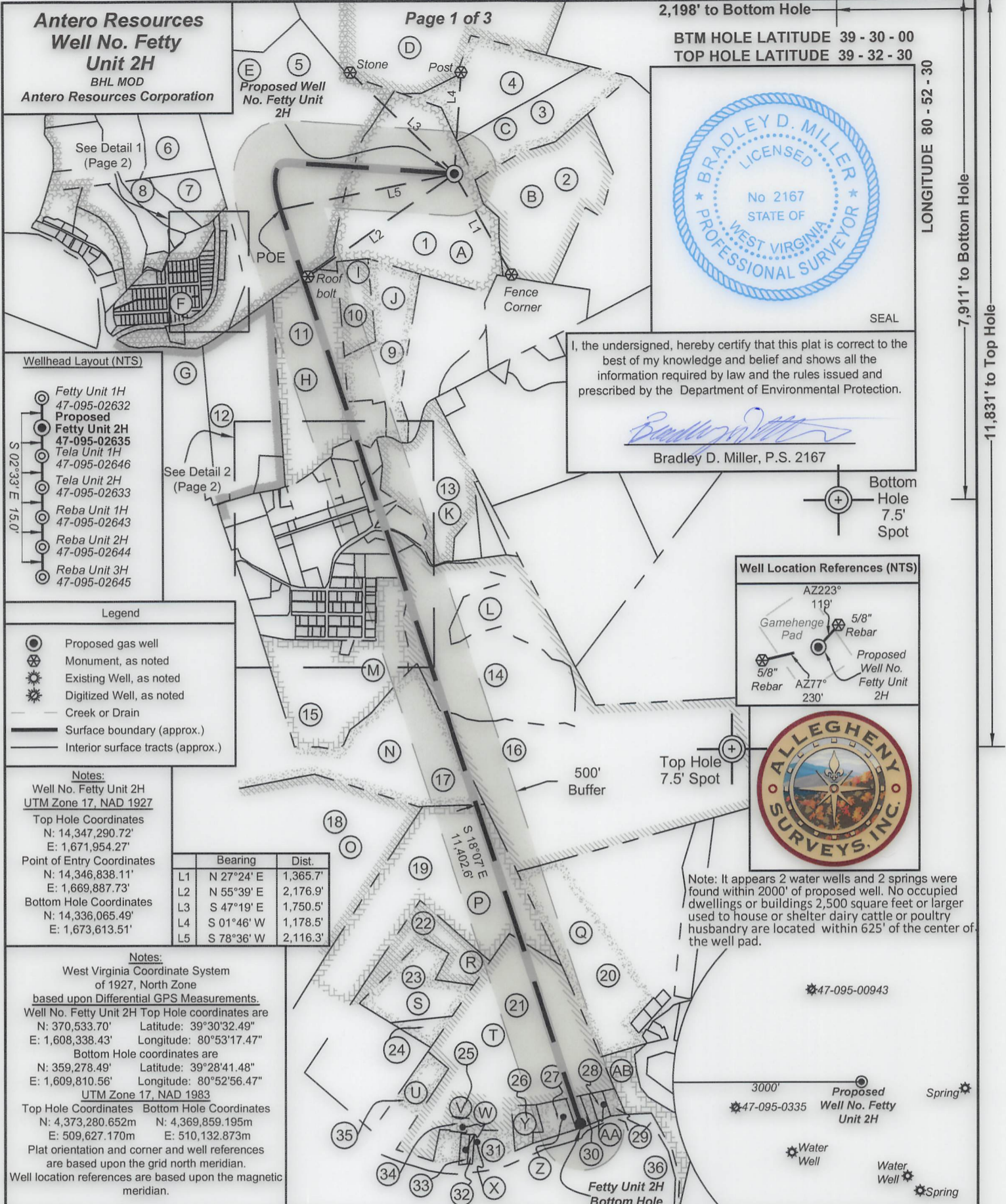
BTM HOLE LATITUDE 39 - 30 - 00
 TOP HOLE LATITUDE 39 - 32 - 30



LONGITUDE 80 - 52 - 30

7,911' to Bottom Hole

11,831' to Top Hole



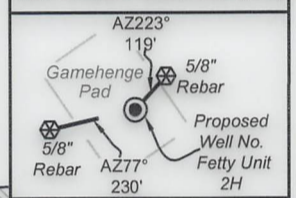
I, the undersigned, hereby certify that this plat is correct to the best of my knowledge and belief and shows all the information required by law and the rules issued and prescribed by the Department of Environmental Protection.

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

SEAL

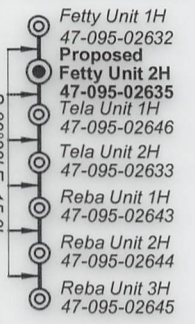
Bottom Hole 7.5' Spot

Well Location References (NTS)



Note: It appears 2 water wells and 2 springs 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.

Wellhead Layout (NTS)



Legend

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

Notes:

Well No. Fetty Unit 2H
 UTM Zone 17, NAD 1927
 Top Hole Coordinates
 N: 14,347,290.72'
 E: 1,671,954.27'
 Point of Entry Coordinates
 N: 14,346,838.11'
 E: 1,669,887.73'
 Bottom Hole Coordinates
 N: 14,336,065.49'
 E: 1,673,613.51'

	Bearing	Dist.
L1	N 27°24' E	1,365.7'
L2	N 55°39' E	2,176.9'
L3	S 47°19' E	1,750.5'
L4	S 01°46' W	1,178.5'
L5	S 78°36' W	2,116.3'

Notes:

West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Fetty Unit 2H Top Hole coordinates are
 N: 370,533.70' Latitude: 39°30'32.49"
 E: 1,608,338.43' Longitude: 80°53'17.47"
 Bottom Hole coordinates are
 N: 359,278.49' Latitude: 39°28'41.48"
 E: 1,609,810.56' Longitude: 80°52'56.47"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,373,280.652m N: 4,369,859.195m
 E: 509,627.170m E: 510,132.873m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

FILE NO: 99-54-E-18
 DRAWING NO: Fetty 2H Well Plat
 SCALE: 1" = 1500'
 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 13 20 19
 OPERATOR'S WELL NO. Fetty Unit 2H
 API WELL NO. 47 - 095 - 02635
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 Proposed 1026'
 LOCATION: ELEVATION: Existing 1052' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Top - Paden City 452.99125; 64.18; 40.3; 28.812; 1.675; 19.60852; 2; 2.3950; 0.457; 3.13; 0.37; 8.28; 41; 102.33; 70.9775; 189.993; 67.67
 DISTRICT: Ellsworth COUNTY: Tyler
 SURFACE OWNER: Ridgetop Capital LP ACREAGE: 64.96
 ROYALTY OWNER: Scott Denomme, et ux; Naomi V. Beagle; Nathaniel Hendricks; Norma M. Long; LEASE NO: ACREAGE: 189.993; 67.67
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 7,000' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 21,600' 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

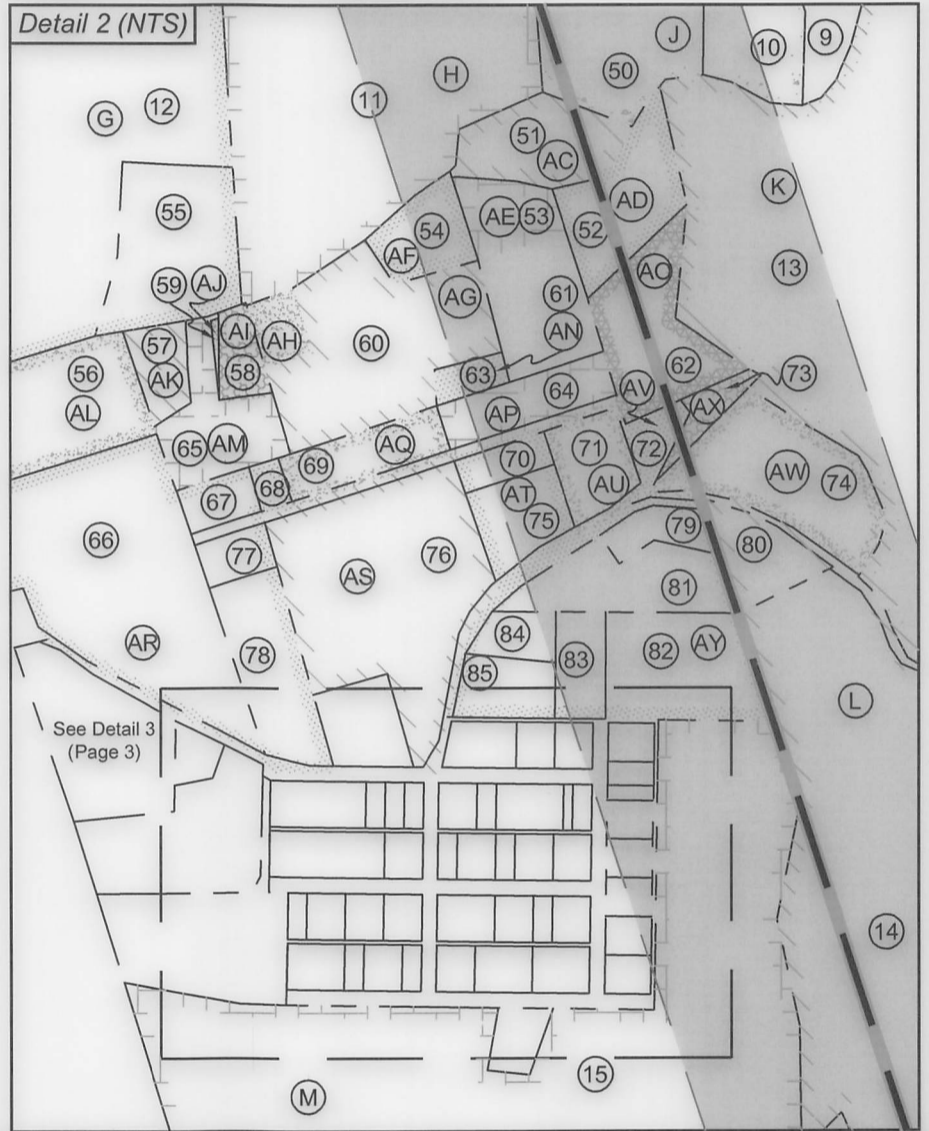
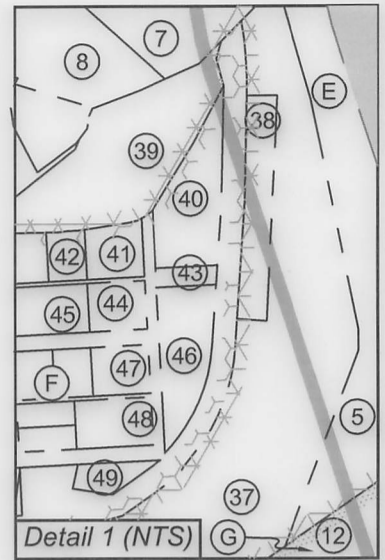
Antero Resources
Well No. Fetty Unit 2H

BHL MOD

Antero Resources Corporation

ID	TM/Par	Owner	Bk/Pg	Acres
1	14-27	Ridgetop Capital, LP	372/299	64.96
2	15-19	Mendenhall, et al	282/723	45
3	15-18	Turner	398/670	26.18
4	14-26	Turner	396/670	26.34
5	14-24	Ridgetop Capital, LP	372/299	124.76
6	14-20.1	Brookover	346/29	13.46
7	14-23	Brookover	327/749	6.88
8	14-22	Caroll	294/535	5.02
9	14-60	Long	333/188	23.99
10	14-58	Newbrough	WB36/617	10.31
11	14-57	Cochran	344/251	40.30
12	14-56.1	Parr	358/643	35.33
13	14-76	Wince	392/489	30.61
14	21-1	Pierce	394/517	55.72
15	20-10	Hickman, et al	341/209	41
16	21-1.1	Fritz	357/660	134.28
17	20-33	Hickman	396/561	77.84
18	20-54	Baker	175/391	100.45
19	20-55	Hickman	AR36/289	71.34
20	21-26	Leasure	378/724	30
21	20-62	Villers & Eskew	WB44/598	67.67
22	20-56	Hickman	152/16	14.96
23	20-56.1	Hickman	395/85	16.405
24	20-56.2	Hickman	438/814	2.95
25	20-66	Hoover	313/120	1.0
26	21-39	Baker Estate	WB25/248	3.15
27	21-37	Fletcher	WB35/614	3.86
28	21-36	Spencer	WB12/126	2.06
29	21-35	Gregg	374/630	0.72
30	21-38	Fletcher	WB35/614	0.75
31	20-65.1	Sutler	273/557	1.58
32	21-63	Sutler	229/658	0.44
33	20-82	Sutler	211/449	0.7
34	20-62.1	Sutler	287/509	0.83
35	20-65	Ashley	509/105	6.85
36	26-46	Jay-Bee Prod. Co.	420/97	286.039
37	14A-29	Weekley	299/300	13
38	14A-29.1	Mensore JC Distribution	285/213	1.0
39	14A-41.1	Parr	306/446	2.5
40	14A-37	Wilcox	214/103	1.28
41	14A-38	Wilcox	155/223	0.44
42	14A-41	Wilcox	286/307	--
43	14A-36.1	Wilcox	199/352	--
44	14A-39	Wilcox	WB28/40	0.378
45	14A-40	Gorrell	WB32/38	0.57
46	14A-36	Wilcox	WB28/40	1.40
47	14A-35	Lemon	329/755	0.43
48	14A-30	Costilow	330/923	0.57
49	14A-28.1	Costilow	330/925	0.283
50	14-60.1	Long	283/511	4.822
51	14-59	Cochran	274/170	1.88
52	14-74	Eddy	182/501	2.0
53	14-71	Cochran	158/402	0.82
54	14-70.1	VanDyne	355/256	0.83
55	14-56	Parr	358/643	2.98
56	14-64	Parr	181/549	3.57
57	14-68.1	Fletcher	319/172	0.75
58	14-68.2	Fletcher	348/355	0.57
59	14-83.1	Fletcher	357/622	0.048
60	14-70.2	George	453/593	4.52
61	14-72	Cochran	344/251	2.94
62	14-75	Walton	331/90	2.4
63	14-70	Mead	275/514	0.37
64	14-73	Mead	275/514	0.73
65	14-68	Deulley	385/798	1.822
66	14-65	Doak	309/491	7.11
67	14-73.1	Doak	253/368	0.54
68	14-73.4	Doak	275/74	0.22
69	14-73.3	Glover	267/26	1.21
70	14-83.1	Ferrell	WB56/202	0.48

ID	TM/Par	Owner	Bk/Pg	Acres
71	14-83	Ferrell	WB56/202	1.51
72	14-77	Maisey	349/762	0.37
73	14-76.1	Maisey	349/762	0.457
74	14-76.2	United Christian	253/98	3.134
75	14-82	Ferrell	WB56/202	1.2
76	14-78	Wagner	509/121	6.71
77	14-73.2	Doak	253/268	0.53
78	14-79	Doak	275/305	1.81
79	14-84	Thomas	331/254	0.65
80	14-93	Smith	540/612	1.087
81	14-85	Smith	189/253	1.9
82	14-87	Amos	377/603	2.55
83	14-86	Turner	397/341	1.76
84	14-86.1	Crawford	WB26/226	0.586
85	20B-36	Jackson	267/480	0.876
86	14-80	Dotson	40/554	1.004
87	20B-1	Archer	WB20/559	0.5
88	20B-2	LeMasters	315/552	0.28
89	20B-2.1	LeMasters	315/552	0.28
90	20B-3	DeLancey	430/413	0.28
91	20B-4	DeLancey	430/413	0.17
92	20B-4.1	Thomas	270/211	0.11
93	20B-5.3	Thomas	238/381	0.28
94	20B-6	Boggs	448/225	0.14
95	20B-7.1	Boggs	448/225	0.07



FILE NO: 99-54-E-18
DRAWING NO: Fetty 2H Well Plat
SCALE: 1" = 1500'
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 13 20 19
OPERATOR'S WELL NO. Fetty Unit 2H
API WELL NO
47 - 095 - 02635 MOD
STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
Proposed 1026'
LOCATION: ELEVATION: Existing 1052' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Top - Paden City 452.99125; 64.18; 40.3; 28.812; 1.675; 19.60852; 2; 2.3950; 0.457; 3.13; 0.37; 8.28; 41; 102.33; 70.9775; 189.993; 67.67
DISTRICT: Ellsworth COUNTY: Tyler
SURFACE OWNER: Ridgetop Capital LP Charles E. & Roberta L. Walton; Caroline S. Maisey (2); United Christian Fellowship; James A. Long, Jr., et ux; Christine Fletcher Mitchell, et vir; Roy A Campbell, et ux; ACREAGE: 64.96
ROYALTY OWNER: Scott Denomme, et ux; Naomi V. Beagle; Nathaniel Hendricks; Norma M. Long; LEASE NO: ACREAGE: 189.993; 67.67
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 7,000' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 21,600' 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

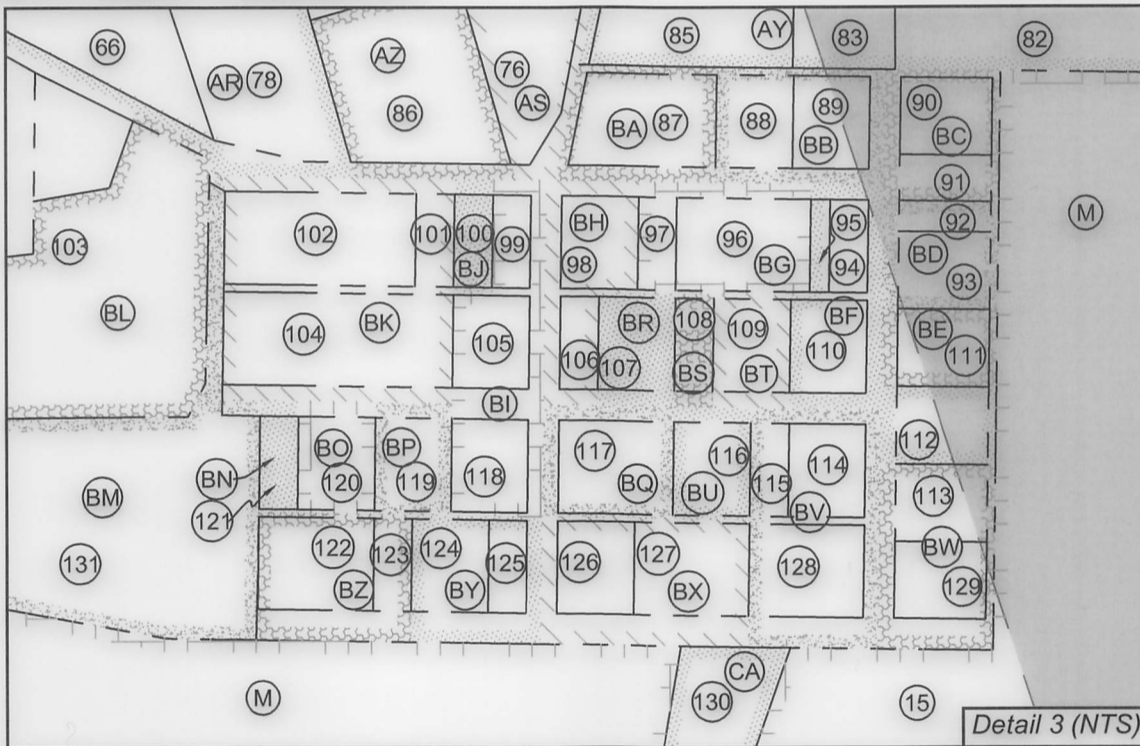
Antero Resources
Well No. Fetty Unit 2H

BHL MOD
Antero Resources Corporation

ID	TM/Par	Owner	Bk/Pg	Acres
96	20B-7	Eddy	342/608	0.48
97	20B-8	Eddy	342/608	0.14
98	20B-9	Wells	326/951	0.28
99	20B-10	McNees	402/712	0.14
100	20B-11	Ferrell	153/344	0.14
101	20B-12	Whiteman	WB30/705	0.14
102	20B-13	Whiteman	WB30/705	0.69
103	14/67	Williams	169/472	3.0
104	20B-14	Whiteman	WB30/705	0.83
105	20B-15	McNees	399/704	0.28
106	20B-16	Wells	326/951	0.14
107	20B-17	Swan	120/115	0.28
108	20B-18	Smith & Swan	10/325	0.14
109	20B-19	Cool	463/751	0.28
110	20B-20	Eddy	448/225	0.28
111	20B-5.1	Cain	WB36/807	0.480
112	20B-5.4	Boggs	234/701	0.28
113	20B-5	Koerber	300/145	0.28
114	20B-21	Boggs	433/592	0.28
115	20B-22	Boggs	433/592	0.14
116	20B-23	Fletcher	320/52	0.28
117	20B-24	Fletcher	341/656	0.41
118	20B-25	McNees	399/704	0.28
119	20B-26	Newman	349/658	0.28
120	20B-27	Hickman, et al	341/209	0.28
121	20B-28	Woofter	225/669	0.14
122	20B-29	Hickman	251/264	0.41
123	20B-30	Hickman	273/569	0.14
124	20B-31	Weese	216/112	0.28
125	20B-32	Weese	216/109	0.14
126	20B-33	Licht	431/756	0.28
127	20B-34	Licht	431/756	0.41
128	20B-35	Boggs	433/592	0.41
129	20B-5.2	Koerber	306/184	0.28
130	20-10.1	Kelly	310/380	0.492
131	20-9	Franuklin	WB57/858	2.77

Lease	
A	Naomi V. Beagle
B	Jack R. Folger, et ux
C	Linda L. Newbrough
D	Stanley M. & Irene E. Koterba
E	Scott Denomme, et ux
F	Scott Denomme, et ux
G	Boyd M. & Patricia L. Parr
H	Nathaniel Hendricks
I	Linda L. Newbrough
J	James A. Long, Jr., et ux
K	T&k Enterprises
L	Carl W. Miller II
M	Connie L. Hickman
N	Richard A. Fonner, et ux
O	William M. Baker, et ux
P	Mary Alice Hickman
Q	Patricia A. Leasure, et ux
R	Mary A. Hickman
S	Lance M. Hickman
T	Nancy Ann Villers
U	Mary Alice Hickman
V	Jeff T. Hoover
W	James S. Suter, et ux
X	James S. Suter, et ux
Y	Levi Pelikan
Z	Christine Fletcher Mitchell, et vir
AA	Gladys V. Gregg
AB	Gladys V. Gregg
AC	Norma M. Long
AD	Roy A. Campbell, et ux
AE	Terry W. Tracy
AF	Wesley S. VanDyne, et ux
AG	Lisa A. George
AH	Roger Carl Ferrell
AI	Scott E. Fletcher
AJ	Scott E. Fletcher
AK	Sandra J. Fletcher
AL	Roger Carl Ferrell
AM	James C. Deulley

Lease	
AN	Charles J. Mead, et ux
AO	Charles E. & Roberta L. Walton
AP	Charles J. Mead, et ux
AQ	Robert G. Glover, et ux
AR	Brian K. Doak, et ux
AS	JB Exploration
AT	Roger Carl Ferrell
AU	Roger Carl Ferrell
AV	Caroline S. Maisey
AW	United Christian Fellowship
AX	Caroline S. Maisey
AY	Carol Ann Ferguson
AZ	Mary Ann Dotson
BA	Neil A. Archer
BB	David W. Lemasters, et ux
BC	Valerie D. DeLancy
BD	Larry Thomas, et ux
BE	Carol Elaine Cain
BF	Rodney E. Boggs, et ux
BG	Marie Eddy
BH	Phillip E. Wells, et ux
BI	Steven H. McNees
BJ	Dianne L. Hornyak
BK	Margaret Ann Whiteman
BL	Tommy L. Williams
BM	Marvin Gene Franklin
BN	Marvin Gene Franklin
BO	Carol L. Amos
BP	Theresa Davies
BQ	Timothy J. Fletcher
BR	Charles R. Swan
BS	Roberta L. Walton
BT	Abram B. Neige, et ux
BU	Timothy Joe Fletcher
BV	Myra E. Boggs
BW	Joseph E. Koerber, et ux
BX	Janice Licht
BY	Ronald P. Weese, et ux
BZ	Michael Hickman, et ux
CA	Craig A. Kelley, et ux



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WVDOT, Harrisville, WV

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



DATE: November 13 20 19
OPERATOR'S WELL NO. Fetty Unit 2H
API WELL NO MOD
47 - 095 - 02635
STATE COUNTY PERMIT

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(IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
Proposed 1026'
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ROYALTY OWNER: Scott Denomme, et ux; Naomi V. Beagle; Nathaniel Hendricks; Norma M. Long; LEASE NO: _____ ACREAGE: _____
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