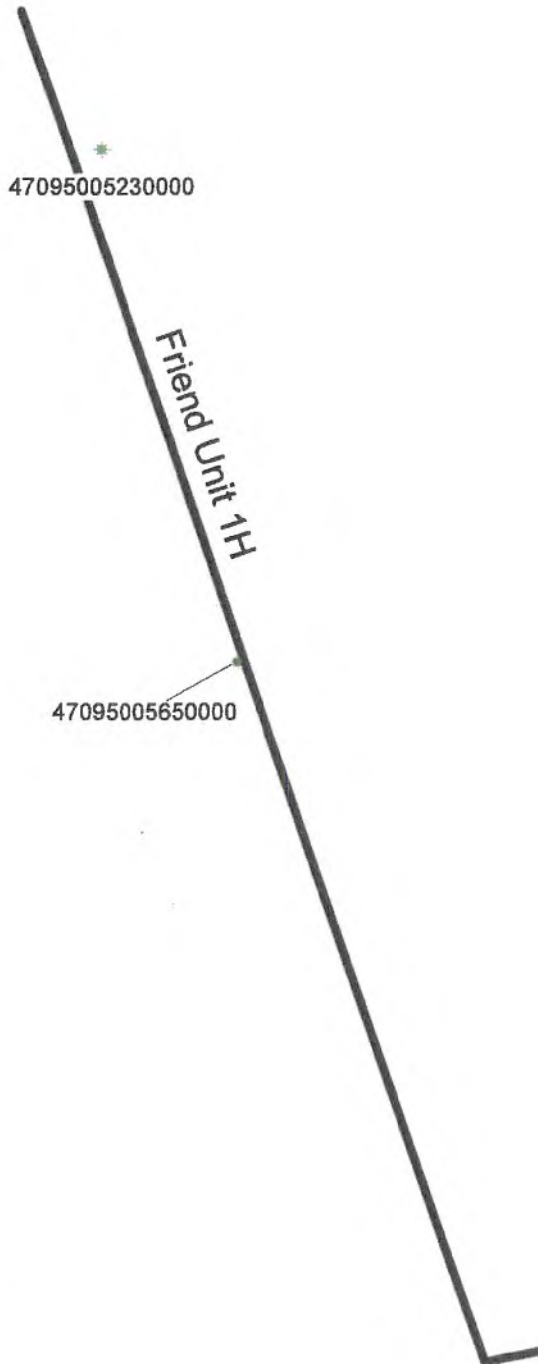




PERMIT MODIFICATION API # 47-095-02695



RECEIVED
Office of Oil and Gas
AUG 10 2020
WV Department of
Environmental Protection

Antero Resources Corporation
Friend Unit 1H - AOR

0 2,500
FEET

WELL SYMBOLS
Oil & Gas Well
Oil Well

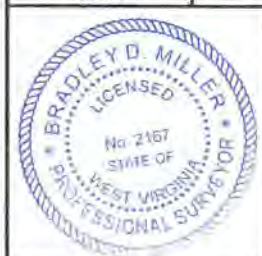
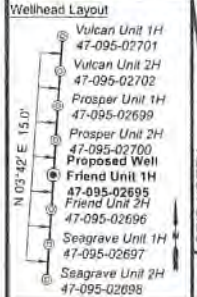
April 15, 2020

JCB
8/5/2020

6,860' to Bottom Hole

1,121' to Top Hole
TOP HOLE LATITUDE 39 - 32 - 30.00
BTM HOLE LATITUDE 39 - 35 - 00

Antero Resources
Well No. Friend 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

Note: 3 water wells 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.



Legend

	Proposed gas well
	Found corner, as noted
	Existing Well, as noted
	Digitized Well
	Existing Road
	Surface boundary (approx.)
	Interior surface tracts (approx.)

Notes
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Friend Unit 1H Top Hole coordinates are
N: 368,424.05' Latitude: 39°30'13.79"
E: 1,622,664.26' Longitude: 80°50'14.30"
Bottom Hole coordinates are
N: 383,308.92' Latitude: 39°32'40.07"
E: 1,617,146.08' Longitude: 80°51'27.57"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,372,710.910m N: 4,377,217.580m
E: 514,002.295m E: 512,245.605m
Plat orientation and corner and well references are based upon the grid north meridian.
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Well No. Friend Unit 1H
UTM Zone 17, NAD 1927
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E: 1,686,308.42'
Point of Entry Coordinates
N: 14,345,106.02'
E: 1,685,718.90'
Bottom Hole Coordinates
N: 14,360,206.80'
E: 1,680,544.51'



	Bearing	Dist.
L1	S 34°17' E	1,271.4'
L2	S 75°31' W	2,075.4'
L3	N 76°09' W	1,520.1'
L4	N 48°05' W	1,155.2'
L5	S 62°50' W	668.7'

LONGITUDE 80 - 50 - 50
13,792' to Top Hole
14,158' to Bottom Hole

RECEIVED
Office of Oil and Gas
AUG 10 2020
WV Department of Environmental Protection

FILE NO: 45-54-E-19
DRAWING NO: Friend 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: July 15, 2020
OPERATOR'S WELL NO: Friend 1H
API WELL NO: 47-095-02695
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1081' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Porter Falls
DISTRICT: Ellsworth Dennis R. & Cinda A. Heintzman; Rose Enterprises, LLC, B&C Oil and Gas Company, Sharon Rose Fair; Helen E. Boggs
SURFACE OWNER: Richard D. Pyles Charles Eugene Friend, et ux; Darrell Soles, Allen Smith, Will E. Morris Trust; Jerry Shoemaker; Michael W. Schmidt, et ux; ACREAGE: 168.5
ROYALTY OWNER: Richard D. Pyles, et ux; Joseph L. Sikko, et ux (2); BRG Appalachia Minerals I, LLC (3) LEASE NO: ACREAGE: 119, 100, 30; 45, 134
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: 7,100' TVD 24,700' 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



ID	TMI/Par	Owner	DB/PG	Acres
1	16-44	Robert A. Pyles, et al	335/482	87.82
2	15-38	Rodney A. & Candis L. Nash	351/701	85.48
3	16-23.1	Bruce Winkelmann	334/185	3.30
4	16-44.1	Carl Straight	543/ 588	3.70
5	16-42.1	Richard D. Pyles	336/815	4.56
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8	16-23	Joseph L. Sitko	314/462	29.7
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10	15-11	Roger Matthes	318/137	115.47
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16	15-8	William A. & Joyce L. Caputo	245/485	14.00
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18	10-53	Kathy M. & Doug O. Smith	331/220	1.10
19	10-52	Darwin & Shirley Martin	306/537	5.00
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21	10-73	Darwin & Shirley Martin	306/537	1.90
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23	10-55	Charles & Shirley E. Neff	218/46	1.47
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36	10-11	J.R. Schamp	318/543	30.00
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42	6-36	Dennis & Clista A. Heintzman	297/640	417.06
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D	Bruce Winkelmann
E	Joseph L. Sitko, et ux
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I	BRC Appalachian Minerals I, LLC
J	BRC Appalachian Minerals I, LLC
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L	BRC Appalachian Minerals I, LLC
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N	James L. Newsom Revocable Trust
O	Will E. Morris Trust
P	Jerry Shoemaker
Q	Kenneth R. Baker
R	Shirley E. Neff
S	Michael W. Schmidt, et ux
T	Haught Family Trust
U	Karen J. Wolfe
V	Darrell Sole
W	Charles Eugene Friend, et ux
X	Allen Smith
Y	Ridgetop Capital II, LP
Z	Helen M. Karcinski, et al
AA	B&C Oil and Gas Company
AB	BRC Appalachian Minerals I, LLC
AC	Sharon Rose Fairii
AD	BRC Appalachian Minerals I, LLC
AE	B&C Oil and Gas Company
AF	Bounty Minerals, LLC
AG	Rose Enterprises, LLC
AH	B&C Oil and Gas Company
AI	Dennis R. & Clista A. Heintzman
AJ	BRC Appalachian Minerals I, LLC

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WV Department of
Environmental Protection

FILE NO: 45-54-E-19
DRAWING NO: Friend Unit 1H Well Plat
SCALE: 1" = 2000'
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Submeter
PROVEN SOURCE OF ELEVATION:
WVDOT, Harrisville, WV

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

DATE: July 15 2020
OPERATOR'S WELL NO. Friend 1H
API WELL NO
47 - 095 - 02695
STATE COUNTY PERMIT

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

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DISTRICT: Ellsworth Dennis R. & Clista A. Heintzman, Rose Enterprises LLC, COUNTY: Tyler 81.482; 177, 29.7,
B&C Oil and Gas Company, Sharon Rose Fairii, Helen E. Boggs 45, 34, 13, 35.25;
SURFACE OWNER: Richard D. Pyles Charles Eugene Friend, et ux; Darrell Sole, Allen Smith; 64.65; 70.0; 67;
ROYALTY OWNER: Richard D. Pyles, et ux; Joseph L. Sitko, et ux (2); BRC Appalachian Minerals I LLC (3) LEASE NO: ACREAGE: 14.06, 68.86; 71.52;
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6,860' to Bottom Hole

1,121' to Top Hole

TOP HOLE LATITUDE 39 - 32 - 30.00
BTM HOLE LATITUDE 39 - 35 - 00.00

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



Wellhead Layout

- Vulcan Unit 1H 47-095-02701
- Vulcan Unit 2H 47-095-02702
- Prosper Unit 1H 47-095-02699
- Prosper Unit 2H 47-095-02700
- Proposed Well Friend Unit 1H 47-095-02695
- Friend Unit 2H 47-095-02696
- Seagrave Unit 1H 47-095-02697
- Seagrave Unit 2H 47-095-02698

GRID NORTH

Eik Fork



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

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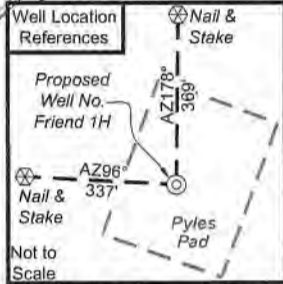


Legend

- Proposed gas well
- Found corner, as noted
- Existing Well, as noted
- Digitized Well
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- Surface boundary (approx.)
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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

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DRAWING NO: Friend Unit 1H Well Plat
SCALE: 1" = 2000'
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PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

DATE: July 15 2020
OPERATOR'S WELL NO. Friend 1H
API WELL NO. **MoDI**
47 - 095 - 02695
STATE COUNTY PERMIT

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

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DISTRICT: Ellsworth COUNTY: Tyler 81.482; 177; 29.7; 45; 34.13; 35.25;
SURFACE OWNER: Richard D. Pyles Charles Eugene Friend, et ux; Darrell Sole; Allen Smith; 64.65; 70.0; 67;
ROYALTY OWNER: Richard D. Pyles, et ux; Joseph L. Sitko, et ux (2); BRC Appalachian Minerals I, LLC (3) LEASE NO: ACREAGE: 14.06; 68.86; 71.52; 119; 100; 30; 45; 134

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ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
Denver, CO 80202 Charleston, WV 25313

LONGITUDE 80 - 50 - 00
13,782' to Top Hole
14,158' to Bottom Hole



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Submeter
PROVEN SOURCE OF ELEVATION:
WVDOT, Harrisville, WV

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

DATE: July 15 20 20
OPERATOR'S WELL NO. Friend 1H
API WELL NO. **MOD 1**
47 - 095 - 02695
STATE COUNTY PERMIT

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Wellhead Layout

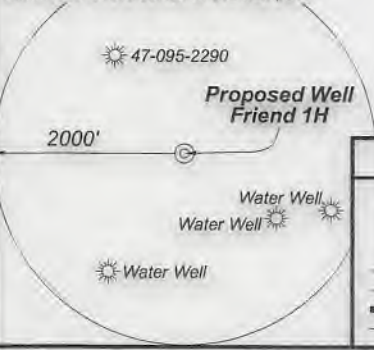
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Bradley D. Miller
Bradley D. Miller, P.S. 2187

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PROVEN SOURCE OF ELEVATION:
WVDOT, Harrisville, WV

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

DATE: July 15 2020
OPERATOR'S WELL NO. Friend 1H
API WELL NO MOD1
47 - 095 - 02695
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Built 1081' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Porter Falls
DISTRICT: Ellsworth COUNTY: Tyler
SURFACE OWNER: Richard D. Pyles DENNIS R. & CLISTA A. HEINTZMAN; ROSE ENERPRISES, LLC; B&C OIL AND GAS COMPANY; SHARON ROSE FALNI; HELEN E. BOGGS COUNTY: Tyler 81.482; 177; 29.7; 45; 34.13; 35.25;
ROYALTY OWNER: Richard D. Pyles, et ux; Joseph L. Silko, et ux (2); BRC Appalachian Minerals I, LLC (3) LEASE NO: ACREAGE: 168.5 64.65; 70.0; 67;
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION 14.06; 68.86; 71.52;
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) BHL MOD 119; 100; 30; 45; 134
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,100' TVD
24,700' 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



ID	TM/Par	Owner	DB/PG	Acres
1	16-44	Robert A. Pyles, et al	335/482	87.82
2	15-38	Rodney A. & Candis L. Nash	351/701	85.48
3	16-23.1	Bruce Winkelmann	334/195	3.30
4	16-44.1	Carl Straight	543/ 598	3.70
5	16-42.1	Richard D. Pyles	336/815	4.56
6	16-42	Richard D. Pyles	379/20	168.50
7	16-22	Joesph L. Jr. & Karen Sitko	296/13	81.70
8	16-23	Joseph L. Sitko	314/462	29.7
9	15-30.1	Roger D. Blizzard & Ruth E. Spencer	343/427	101.38
10	15-11	Roger Matthess	318/137	115.47
11	15-10	Antero Midstream, Inc.	617/739	34.13
12	16-1	Antero Midstream, Inc.	617/739	35.25
13	16-2	David E. Bowyer	622/775	80.75
14	16-4	Darrell J. Sole	227/376	35.00
15	15-9	Antero Midstream, LLC	586/544	132.19
16	15-8	William A. & Joyce L. Caputo	245/485	14.00
17	11-36	David W. Fiber	574/847	21.16
18	10-53	Kathy M. & Doug O. Smith	331/220	1.10
19	10-52	Darwin & Shirley Martin	306/537	5.00
20	10-72	Darwin & Shirley Martin	322/28	1.99
21	10-73	Darwin & Shirley Martin	306/537	1.90
22	10-56	Mary K. Neff	413/731	22.06
23	10-55	Charles & Shirley E. Neff	218/46	1.47
24	10-54	Michael W. & Brenda S. Schmidt	244/409	14.06
25	11-32	Darwin & Shirley Martin	348/344	80.66
26	10-70	Darwin & Shirley Martin	326/490	1.19
27	11-32.2	Bernard R. & Denise F. McDougal	636/587	0.54
28	10-51	Charles E. & Laura Lynn Friend	334/839	8.03
29	10-49	Charles E. & Laura Lynn Friend	334/836	71.52
30	10-57	Charles E. & Laura Lynn Friend	334/836	84.39
31	11-1	Gertrude L. Pugh	314/140	70.00
32	10-46	Opal Carol Tallman	282/382	114.00
33	10-10	Ronald D. & Sandra Sue Martin	378/322	58.35
34	10-8	Helen M. Young	198/126	50.50
35	10-12	Sandra K. Metz	376/458	30.50
36	10-11	J.R. Schamp	318/543	30.00
37	10-9	Brian E. & Barbara J. Courtney	344/626	52.00
38	10-5	Brian E. & Barbara J. Courtney	344/626	30.00
39	10-4	Stefan L. & Alberta B. Smolski	356/467	56.08
40	10-13	Kevin S. & Melinda S. Goff	597/808	87.19
41	6-49	Dennis & Clista A. Heintzman	297/637	45.00
42	6-36	Dennis & Clista A. Heintzman	297/640	417.06
43	6-30.1	Lary M. & Amy B. Adams	369/344	150.34

Leases	
A	Richard D. Pyles, et ux
B	Richard D. Pyles, et ux
C	Helen E. Boggs
D	Bruce Winkelmann
E	Joseph L. Sitko, et ux
F	Joseph L. Sitko, et ux
G	BRC Appalachian Minerals I, LLC
H	Roger D. Blizzard
I	BRC Appalachian Minerals I, LLC
J	BRC Appalachian Minerals I, LLC
K	BRC Appalachian Minerals I, LLC
L	BRC Appalachian Minerals I, LLC
M	James Matthess
N	James L. Newsom Revocable Trust
O	Will E. Morris Trust
P	Jerry Shoemaker
Q	Kenneth R. Baker
R	Shirley E. Neff
S	Michael W. Schmidt, et ux
T	Haught Family Trust
U	Karen J. Wolfe
V	Darrell Sole
W	Charles Eugene Friend, et ux
X	Allen Smith
Y	Ridgetop Capital II, LP
Z	Helen M. Karcinski, et al
AA	B&C Oil and Gas Company
AB	BRC Appalachian Minerals I, LLC
AC	Sharon Rose Faini
AD	BRC Appalachian Minerals I, LLC
AE	B&C Oil and Gas Company
AF	Bounty Minerals, LLC
AG	Rose Enterprises, LLC
AH	B&C Oil and Gas Company
AI	Dennis R. & Clista A. Heintzman
AJ	BRC Appalachian Minerals I, LLC

FILE NO: 45-54-E-19
 DRAWING NO: Friend 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: July 15 20 20
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 API WELL NO **1**
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 ROYALTY OWNER: Richard D. Pyles, et ux; Joseph L. Sitko, et ux (2); BRC Appalachian Minerals I, LLC (3) Will E. Morris Trust; Jerry Shoemaker; Michael W. Schmidt, et ux; 45; 34.13; 35.25;
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