



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

Monday, November 26, 2018
PERMIT MODIFICATION APPROVAL
Horizontal 6A / Horizontal 6A Well - 1

ANTERO RESOURCES CORPORATION
1615 WYNKOOP STREET

DENVER, CO 80202

Re: Permit Modification Approval for BOUNTY UNIT 3H
47-095-02364-00-00

Point of entry and lateral extension

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

A handwritten signature in blue ink, appearing to read 'James A. Martin', is written over the typed name and title.

Operator's Well Number: BOUNTY UNIT 3H
Farm Name: GARY D. DAWSON ET UX
U.S. WELL NUMBER: 47-095-02364-00-00
Horizontal 6A Horizontal 6A Well - 1
Date Modification Issued: November 26, 2018

Promoting a healthy environment.



September 12, 2018

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 57th Street
Charleston, WV 25304

Ms. Adkins:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for two approved wells on the existing Dawson Pad. We are requesting to change the point of entry for Bounty Unit 3H (API# 47-095-02364), and Pierson Unit 3H(API# 47-095-02415).

Attached you will find the following documents:

- REVISED Form WW-6B
- REVISED Mylar Plat, which shows the new Lateral Length and Estimated Measured Depth
- REVISED Form WW-6A1, which shows the new leases we will be drilling into
- Copies of AOR

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

Thank you in advance for your consideration.

Sincerely,

Megan Griffith
Permitting Agent
Antero Resources Corporation

Enclosures

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SEP 13 2018

WV Department of
Environmental Protection

WW-6B
(04/15)

API NO. 47-095 - 02364
OPERATOR WELL NO. Bounty Unit 3H
Well Pad Name: Dawson 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 Centerville Shirley 7.5'
Operator ID County District Quadrangle

2) Operator's Well Number: Bounty Unit 3H Well Pad Name: Dawson Pad

3) Farm Name/Surface Owner: Gary D. Dawson et ux Public Road Access: State Route 18

4) Elevation, current ground: 1009' 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 No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Marcellus Shale: 6454' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2800#

8) Proposed Total Vertical Depth: 6454' TVD

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 18017' MD

11) Proposed Horizontal Leg Length: 11174'

12) Approximate Fresh Water Strata Depths: 115', 320', 455'

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

14) Approximate Saltwater Depths: 652', 1583', 1830

15) Approximate Coal Seam Depths: 275', 424', 975

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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API NO. 47- 095 - 02364
 OPERATOR WELL NO. Bounty Unit 3H
 Well Pad Name: Dawson Pad

WW-6B
 (04/15)

18)

CASING AND TUBING PROGRAM

<u>TYPE</u>	<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#	40'	40'	CTS, 38 Cu. Ft.
Fresh Water	13-3/8"	New	J-55/H-40	54.5#/48#	505' *see #19	505' *see #19	CTS, 702 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2500'	2500'	CTS, 1018 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	13200'	13200'	3223 Cu. Ft
Tubing	2-3/8"	New	N-80	4.7#			
Liners							

<u>TYPE</u>	<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	30"	24"	0.438"	1530	50	Class A	1.18
Fresh Water	13-3/8"	17-1/2"	0.38"/0.33"	2730/1730	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"	0.361"	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							

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PACKERS

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

WW-6B
(10/14)

API NO. 47- 095 - 02364
OPERATOR WELL NO. Bounty Unit 3H
Well Pad Name: Dawson 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): Existing 28.65 acres

22) Area to be disturbed for well pad only, less access road (acres): Existing 9.14 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.

*Note: Attach additional sheets as needed.

WW-6A1

Operator's Well Number Bounty Unit 3H

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
<u>Gary D. Dawson, et ux Lease</u> Gary D. Dawson, et ux	Antero Resources Corporation	1/8+	0459/0133
<u>Patty Buterbaugh Lease</u> Patty Buterbaugh	Antero Resources Corporation	1/8+	0444/0337
<u>Carl W. Ash Lease</u> Carl W. Ash	Antero Resources Corporation	1/8+	0499/0831
<u>Robert C. Dean Lease</u> Robert C. Dean	Antero Resources Corporation	1/8+	0481/0807
<u>Carl W. Ash Lease</u> Carl W. Ash	Antero Resources Corporation	1/8+	0499/0831
<u>Larry F. Hadley et ux Lease</u> Larry F. Hadley	Antero Resources Corporation	1/8+	0452/0567
<u>David E. Bowyer Lease</u> David E. Bowyer Antero Resources Appalachia Corporation	Antero Resources Appalachia Corporation Antero Resources Corporation	1/8 Name Change	0399/0369 0557/0430
<u>Harry Ash, et al Lease</u> Harry Ash J.A. Underwood Quaker State Oil Refining Corp. Petro Mark Inc Sancho Oil & Gas Corporation	J.A. Underwood Quaker State Oil Refining Corp. Petro Mark Inc Sancho Oil & Gas Corporation Antero Resources Corporation	1/8 Assignment Assignment Assignment Assignment	0171/0365 0171/0528 0246/0324 0372/0293 0377/0235
<u>Wilma J. Howard Lease</u> Wilma J. Howard Coastal Corporation Pardee Exploration Company Paul E. Pierson Adeline T. Pierson William P. Pierson Sancho Oil & Gas Company	Coastal Corporation Pardee Exploration Company Paul E. Pierson Adeline T. Pierson William P. Pierson Sancho Oil & Gas Company Antero Resources Corporation	1/8+ Assignment Assignment Assignment Assignment Assignment Assignment	0281/0317 0282/0458 0328/0052 0031/0064 0363/0452 0375/0239 0377/0235

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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.

CONTINUED ON NEXT PAGE

WW-6A1

Operator's Well Number Bounty Unit 3H

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
Harry Ash, et al Lease			
Harry Ash, et al	J.A. Underwood	1/8	0171/0365
J.A. Underwood	Quaker State Oil Refining Corp.	Assignment	0171/0528
Quaker State Oil Refining Corp.	Petro Mark Inc	Assignment	0246/0324
Petro Mark Inc	Sancho Oil & Gas Corporation	Assignment	0372/0293
Sancho Oil & Gas Corporation	Antero Resources Corporation	Assignment	0377/0235
Peggy Ellen Wince Lease			
Peggy Ellen Wince	Antero Resources Corporation	1/8+	0413/0722
Carl W. Ash, et ux Lease			
Carl W. Ash, et ux	Chesapeake Appalachia LLC	1/8	0368/0631
Chesapeake Appalachia, LLC	SWN Production Company, LLC	Assignment	0465/0463
SWN Production Company	Antero Resources Corporation	Assignment	0538/0578
E. Thomas Estlack, et ux Lease			
E. Thomas Estlack, et ux	Sancho Oil & Gas Corporation	1/8	0330/0838
Sancho Oil & Gas Corporation	Antero Resources Corporation	Assignment	0377/0235
John W. Mullett, et ux Lease			
John W. Mullett, et ux	EOG Resources Inc	1/8	0353/0293
EOG Resources Inc	PC Exploration Inc	Assignment	0355/0817
PC Exploration Inc	Phillips Exploration Inc	Merger	PA SOS
Phillips Exploration Inc	Chesapeake Appalachia, LLC	Assignment	0375/0312
Chesapeake Appalachia, LLC	SWN Production Company, LLC	Assignment	0465/0463
SWN Production Company, LLC	Antero Resources Corporation	Assignment	0540/0767
E. Thomas Estlack, et ux Lease			
E. Thomas Estlack, et ux	Sancho Oil & Gas Corporation	1/8	0330/0834
Sancho Oil & Gas Corporation	Antero Resources Corporation	Assignment	0377/0235

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WW-6A1
(5/13)

Operator's Well No. Bounty Unit 3H

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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>Alfred Stracha Lease</u>	Alfred Stracha	Antero Resources Corporation	1/8+	0483/0449

*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

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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: Kevin Kilstrom
Its: Senior VP of Production

**FORM WV-6A1
EXHIBIT 1**

FILED

JUN 10 2013

Natalie E. Tammert
Secretary of State
1900 Kanawha Blvd E
Bldg 1, Suite 157-K
Charleston, WV 25305



**IN THE OFFICE OF
SECRETARY OF STATE**
Fancy Becker, Manager
Corporations Division
Tel: (304)558-8000
Fax: (304)559-8381
Website: www.wvnet.com
E-mail: business@wvnet.com

FILE ONE ORIGINAL
(Two if you want a third stamped copy returned to you)
FEE: \$25.00

**APPLICATION FOR
AMENDED CERTIFICATE
OF AUTHORITY**

Office Hours: Monday - Friday
8:30 a.m. - 5:00 p.m. ET

*** In accordance with the provisions of the West Virginia Code, the undersigned corporation hereby ***
applies for an Amended Certificate of Authority and submits the following statements:

1. Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachia Corporation
2. Date Certificate of Authority was issued in West Virginia: 6/25/2008
3. Corporate name has been changed to: Antero Resources Corporation
(Attach one Certified Copy of Name Change as filed in home State of incorporation.)
4. Name the corporation elects to use in WV: Antero Resources Corporation
(due to home state name not being available)
5. Other amendments: _____
(attach additional pages if necessary)
6. Name and phone number of contact person. (This is optional; however, if there is a problem with the filing, listing a contact person and phone number may avoid having to return or reject the document.)
Alvyn A. Schopp (303) 357-7310
Contact Name Phone Number
7. Signature Information (See below ***Important Legal Notice Regarding Signatures***):
Print Name of Signer: Alvyn A. Schopp Title/Capacity: Authorized Person
Signature: [Handwritten Signature] Date: June 10, 2013

Important Legal Notice Regarding Signatures For West Virginia Code §14D-1-129. Penalty for signing false document. Any person who signs a document he or she knows is false in any material respect and knows that the document is to be delivered to the secretary of state for filing is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one thousand dollars or confined in the county or regional jail not more than one year, or both.

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47095017250000



Bounty Unit 3H

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PERMIT MODIFICATION (API# 47-095-02364)

UWI (API#)	Well Name	Well Number	Operator	Hist Oper	ELEV_GR	TD	TD(SSTVD)	Perforated Interval	Producing Formations	Producing zones not perforated
47095017250000	ESTLACK E THOMAS	2	TEXAS KEYSTONE INC	SANCHO OIL & GAS	910	5000	-4090	4840' - 4843'	Riley, Benson	Keener, Big Injun, Bradford

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LATITUDE 39°25'00"

11,444'

2,334' TO BOTTOM HOLE

LATITUDE 39°25'00"

Antero Resources Corporation
Well No. Bounty Unit 3H

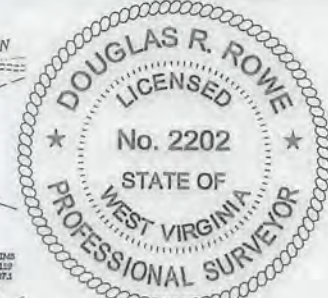
NOTES:
WELL 3H TOP HOLE INFORMATION:
N: 323,736ft E: 1,611,677ft
LAT: 39°22'50.50" LON: 80°52'25.75"
BOTTOM HOLE INFORMATION:
N: 335,341ft E: 1,609,186ft
LAT: 39°24'44.82" LON: 80°52'59.74"
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 3H TOP HOLE INFORMATION:
N: 4,359,041m E: 510,882m
BOTTOM HOLE INFORMATION:
N: 4,362,563m E: 510,064m



NOTE
NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.

- A = DAVID MCCARTNEY, D.B. 348 PG. 102, T.M. 12 PAR. 14.5, 1.81 AC.
B = GARY DAWSON, D.B. 125 PG. 336, T.M. 12 PAR. 14.3, 0.14 AC.
C = NATHANIEL HENDRICKS, D.B. 284 PG. 544, T.M. 12 PAR. 14.2, 0.14 AC.
D = GARY DAWSON, D.B. 216 PG. 419, T.M. 12 PAR. 14.1, 2.22 AC.
E = GARY DAWSON, D.B. 209 PG. 626, T.M. 12 PAR. 14.4, 1.05 AC.



WV NORTH ZONE GRID NORTH

1,537' TO BOTTOM HOLE LONGITUDE 80°52'30"

13,102'

LONGITUDE 80°50'00"

3 WATER WELLS WERE LOCATED WITHIN 2000' OF CENTER OF PAD



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 PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

LEGEND

- Surface Owner Boundary Lines +/-
Interior Surface Tracts +/-
Existing Fence
Found monument, as noted

REFERENCES



JOB # 16-033WA
DRAWING # BOUNTY3HAD
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

DATE 08/29/2018
OPERATOR'S WELL# BOUNTY UNIT #3H

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL 47 095 02364
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X STATE COUNTY PERMIT
LOCATION: ELEVATION 1,009' - AS BUILT WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE SHIRLEY 7.5' (TH) MIDDLEBOURNE 7.5' (BH) DISTRICT CENTERVILLE COUNTY TYLER
SURFACE OWNER GARY D. DAWSON ET UX ACREAGE 104.27 ACRES +/-
OIL & GAS ROYALTY OWNER GARY D. DAWSON ET UX; WVDNR; PATTY L. BUTERBAUGH; CARL ASH; ROBERT C. DEAN; CARL ASH; LEASE ACREAGE 104.27 AC.; 94.78 AC.; 103.81 AC.; 2.1 AC.; 50.7 AC.; 37 AC.;
LARRY F. HADLEY; DAVID E. BOWYER; HARRY ASH & JESSIE D. ASH ET AL.; WILMA J. HOWARD ET AL.; PEGGY E. WINGE; 102.5 AC.; 138 AC.; 291 AC.; 239 AC.; 65 AC.;
CARL W. ASH; E. THOMAS ESTLACK ET UX; JOHN W. MULLETT ET UX; E. THOMAS ESTLACK ET UX; ALFRED STRACHA 362.8 AC.; 50 AC.; 45 AC.; 85.5 AC.; 101.2 AC.;
PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE X
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD POE
TARGET FORMATION MARCELLUS PLUG & ABANDON CLEAN OUT & REPLUG
WELL OPERATOR ANTERO RESOURCES CORP. ESTIMATED DEPTH 6,454' TVD 18,017' MD
DESIGNATED AGENT DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS 1615 WYNKOOP ST. ADDRESS 5400 D BIG TYLER ROAD
DENVER, CO 80202 CHARLESTON, WV 25313

LATITUDE 39°25'00"

11,444'

2,334' TO BOTTOM HOLE

LATITUDE 39°25'00"

Antero Resources Corporation
Well No. Bounty Unit 3H

NOTES:
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3H BOTTOM HOLE

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C = NATHANIEL HENDRICKS, D.B. 284 PG. 544, T.M. 12 PAR. 14.2, 0.14 AC.
D = GARY DAWSON, D.B. 216 PG. 419, T.M. 12 PAR. 14.1, 2.2 AC.
E = GARY DAWSON, D.B. 206 PG. 626, T.M. 12 PAR. 14.4, 1.05 AC.

WV NORTH ZONE
GRID NORTH

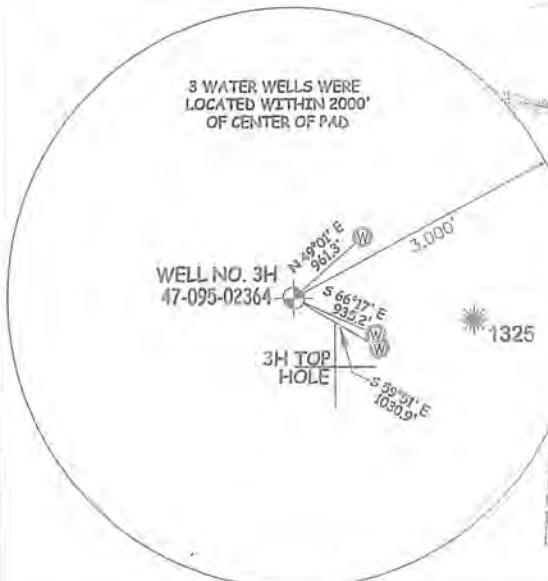
(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 3H TOP HOLE INFORMATION:
N: 4,359,041m E: 510,882m
BOTTOM HOLE INFORMATION:
N: 4,362,563m E: 510,064m



1,537' TO BOTTOM HOLE
LONGITUDE 80°52'30"

13,102'

LONGITUDE 80°50'00"



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.

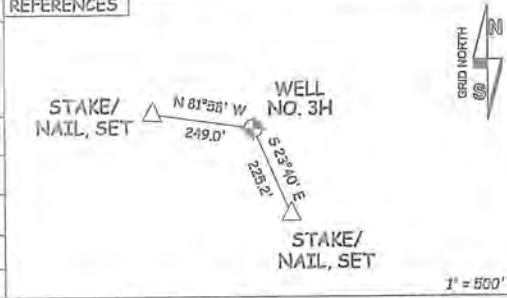


STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415



JOB # 16-033WA
DRAWING # BOUNTY3HAD
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

LEGEND
--- Surface Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
- x - x - Existing Fence
⊕ Found monument, as noted
DOUGLAS R. ROWE P.S. 2202
DATE 08/29/2018
OPERATOR'S WELL# BOUNTY UNIT 3H



WELL TYPE: OIL	GAS X	LIQUID INJECTION	WASTE DISPOSAL	47	095	02364			
(IF "GAS") PRODUCTION	X	STORAGE	DEEP	SHALLOW X	STATE	COUNTY	PERMIT		
LOCATION: ELEVATION	1,009' - AS BUILT	WATERSHED	HEADWATERS MIDDLE ISLAND CREEK	QUADRANGLE	SHIRLEY 7.5' (TH) MIDDLEBOURNE 7.5' (BH)	DISTRICT	CENTERVILLE COUNTY TYLER		
SURFACE OWNER	GARY D. DAWSON ET UX	ACREAGE	104.27 ACRES +/-	OIL & GAS ROYALTY OWNER	GARY D. DAWSON ET UX; WVDNR; PATTY L. BUTERBAUGH; CARL ASH; ROBERT C. DEAN; CARL ASH; LARRY F. HADLEY; DAVID E. BOWYER; HARRY ASH & JESSIE D. ASH ET AL; WILMA J. HOWARD ET AL; PEGGY E. WINCE; CARL W. ASH; E. THOMAS ESTLACK ET UX; JOHN W. MULLETT ET UX; E. THOMAS ESTLACK ET UX; ALFRED STRACHA	LEASE ACREAGE	104.27 AC.±; 64.78 AC.±; 103.81 AC.±; 2.1 AC.±; 50.7 AC.±; 37 AC.±; 102.5 AC.±; 138 AC.±; 291 AC.±; 239 AC.±; 65 AC.±; 362.8 AC.±; 50 AC.±; 45 AC.±; 85.5 AC.±; 101.2 AC.±		
PROPOSED WORK:	DRILL	CONVERT	DRILL DEEPER	REDRILL	FRACTURE OR STIMULATE X	PLUG OFF OLD FORMATION	PERFORATE NEW FORMATION X	OTHER PHYSICAL CHANGE IN WELL (SPECIFY) MOD POE	
TARGET FORMATION	MARCELLUS	ESTIMATED DEPTH	6,454' TVD 18,017' MD	PLUG & ABANDON	CLEAN OUT & REPLUG	WELL OPERATOR	ANTERO RESOURCES CORP.	DESIGNATED AGENT	DIANNA STAMPER - CT CORPORATION SYSTEM
ADDRESS	1615 WYNKOOP ST. DENVER, CO 80202	ADDRESS	5400 D BIG TYLER ROAD CHARLESTON, WV 25313						

COUNTY NAME PERMIT