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west virginia department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Earl Ray Tomblin, Governor  
Randy C. Huffman, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

## PERMIT MODIFICATION APPROVAL

March 31, 2014

ANTERO RESOURCES CORPORATION  
1625 17TH STREET, SUITE 300  
DENVER, CO 80202

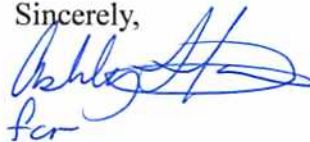
Re: Permit Modification Approval for API Number 1706419 , Well #: DUFFLEMEYER UNIT 2I  
**Moved Lateral**

Oil and Gas Operator:

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.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,



Gene Smith  
Regulatory/Compliance Manager  
Office of Oil and Gas



January 28, 2014

Antero Resources  
1625 17th Street  
Denver, Colorado 80202  
Office 303.357.7310  
Fax 303.357.7315

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

Ms. Laura Cooper:

Antero Resources Corporation (Antero) would like to submit the following permit modifications for two approved wells on the Snake Run Pad. We are requesting to move the horizontal lateral which will change the bottom hole location of the Dufflemeyer Unit 2H (API# 47-017-06419) and Honey Unit 1H (API# 47-017-06420).

Attached you will find the following documents:

- REVISED Form WW-6A1, which shows the leases we will be drilling into
- REVISED Mylar Plat, which shows the new bottom hole location

If you have any questions please feel free to contact me at (303) 357-7323.

Thank you in advance for your consideration.

Sincerely,

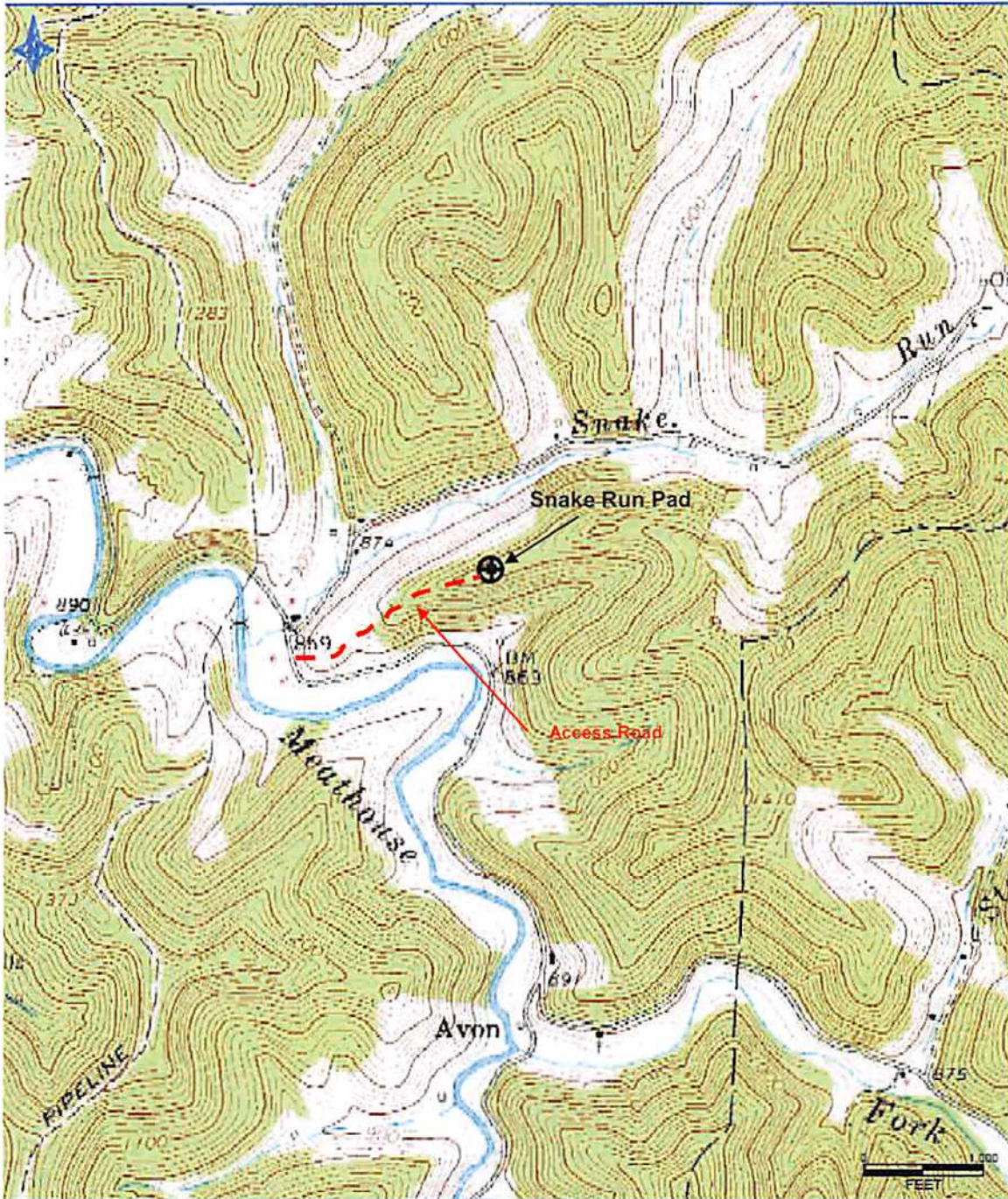
Ashlie Mihalcin  
Permit Representative  
Antero Resources Corporation

Enclosures

Received  
JAN 31 2014  
Office of Oil and Gas  
WV Dept. of Environmental Protection

04/04/2014

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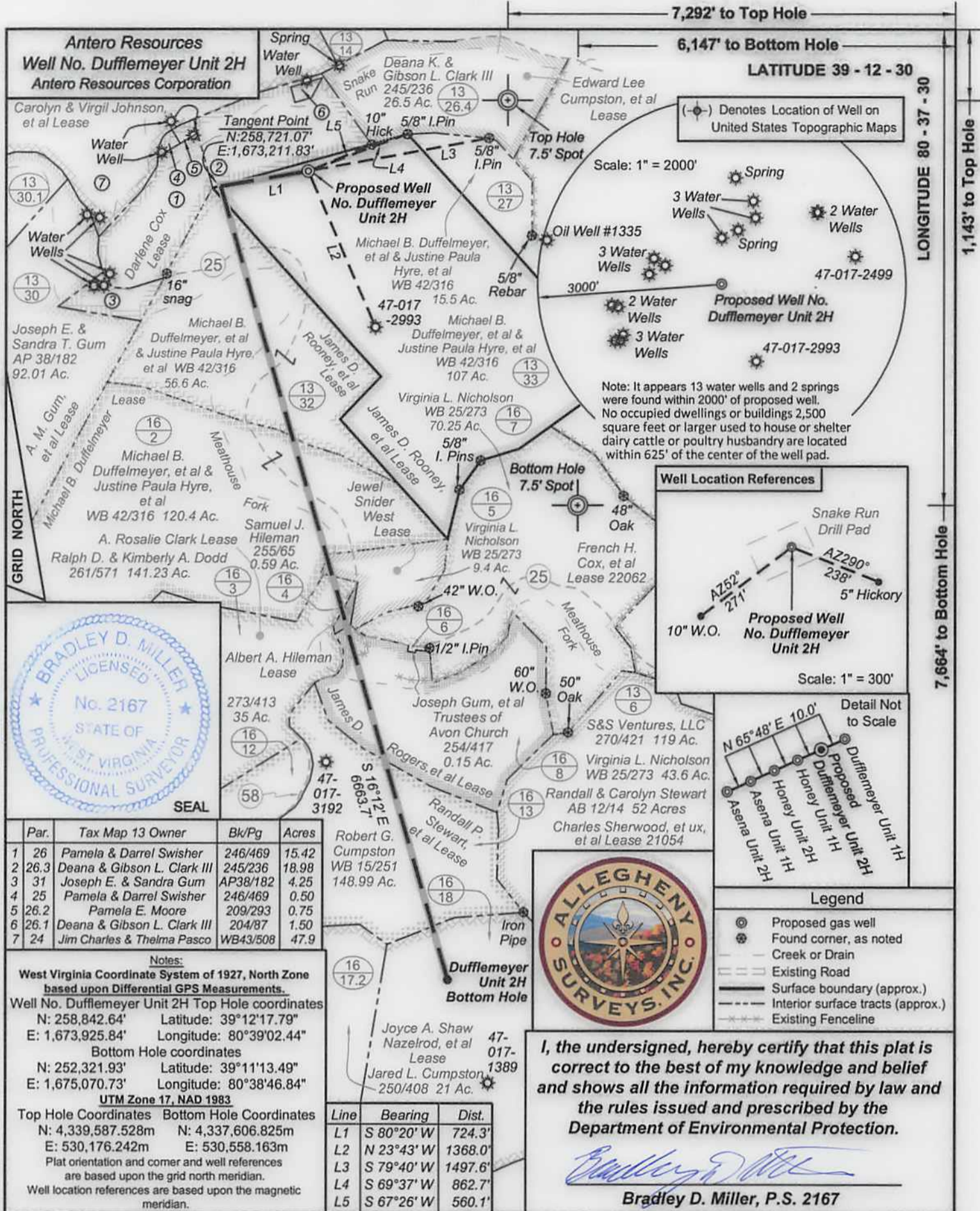


**Antero Resources Corporation**  
Appalachian Basin  
Dufflemeyer Unit 2H  
Doddridge County  
Quadrangle: New Milton  
Watershed: Meathouse Fork  
District: New Milton  
Date: 11-1-2013

**RECEIVED**  
Office of Oil & Gas

NOV 23 2013

WV Department of Environmental Protection 04/04/2014



Par.	Tax Map 13 Owner	Bk/Pg	Acres
1	Pamela & Darrel Swisher	246/469	15.42
2	Deana & Gibson L. Clark III	245/236	18.98
3	Joseph E. & Sandra Gum	AP38/182	4.25
4	Pamela & Darrel Swisher	246/469	0.50
5	Pamela E. Moore	209/293	0.75
6	Deana & Gibson L. Clark III	204/87	1.50
7	Jim Charles & Thelma Pasco	WB43/508	47.9

**Notes:**  
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
 Well No. Dufflemeyer Unit 2H Top Hole coordinates  
 N: 258,842.64' Latitude: 39°12'17.79"  
 E: 1,673,925.84' Longitude: 80°39'02.44"  
 Bottom Hole coordinates  
 N: 252,321.93' Latitude: 39°11'13.49"  
 E: 1,675,070.73' Longitude: 80°38'46.84"  
 UTM Zone 17, NAD 1983  
 Top Hole Coordinates Bottom Hole Coordinates  
 N: 4,339,587.528m N: 4,337,606.825m  
 E: 530,176.242m E: 530,558.163m  
 Plat orientation and corner and well references are based upon the grid north meridian.  
 Well location references are based upon the magnetic meridian.

Line	Bearing	Dist.
L1	S 80°20' W	724.3'
L2	N 23°43' W	1368.0'
L3	S 79°40' W	1497.6'
L4	S 69°37' W	862.7'
L5	S 67°26' W	560.1'



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: 67-30-NM-13  
 DRAWING NO: 67-13 Dufflemeyer Unit 2H  
 SCALE: 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY: Submeter  
 PROVEN SOURCE OF ELEVATION: WVDOT, Bridgeport, WV

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

DATE: January 22 2014  
 OPERATOR'S WELL NO. Dufflemeyer Unit 2H  
 API WELL NO. MOD  
 47 - 017 - 06419  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: 1081' WATERSHED: Meathouse Fork QUADRANGLE: New Milton  
 DISTRICT: New Milton  
 SURFACE OWNER: Michael B. Dufflemeyer, et al; Jewel Snider West; James D. Rogers, et al; Albert A. Hileman; Randall P. Stewart, et al  
 ROYALTY OWNER: Joyce A. Shaw Nazelrod, et al; James D. Rooney, et al (2); A. Roslie Clark  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) Modification- BHL  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 7,400' TVD 14,500' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
 ADDRESS: 1625 17th Street ADDRESS: 5400 D Big Tyler Road  
 Denver, CO 80202 Charleston, WV 25313