west virginia department of environmental protection

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

PERMIT MODIFICATION APPROVAL

December 03, 2013

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

Re: Permit Modification Approval for API Number 1706183 , Well #: WELLING UNIT 2H
Lateral Extended

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,

for
Gene Smith
Regulatory/Compliance Manager
Office of Oil and Gas

ANTERO
RESOURCES

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

November 7, 2013

West Virginia Department of Environmental Protection
Office of Oil and Gas
Attn: Ms. Laura Cooper
601 57th 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 existing Marsden Pad. We are requesting to extend the horizontal laterals which will change the bottom hole locations of the Welling Unit 1H (API# 47-017-06181) and Welling Unit 2H (API# 47-017-06183).

Attached you will find the following documents:

- REVISED Form WW-6B, which shows the revised MD and Production Casing/Cement program
- 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
Office of Oil and Gas
NOV 08 2013
WV Department of
Environmental Protection

API# 47-017-06183 PERMIT MODIFICATION

WW-6B
(9/13)

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

1) Well Operator: Antero Resources Corporation | 494488557 (Operator ID) | 017- Doddridge (County) | Greenbrier (District) | Big Isaac (Quadrangle)

2) Operator's Well Number: Welling Unit 2H Well Pad Name: Marsden Pad

3) Farm Name/Surface Owner: Richard E. & Wilma J. Marsden Public Road Access: CR 17

4) Elevation, current ground: 971' Elevation, proposed post-construction: 971'

5) Well Type (a) Gas ■ Oil ____ Underground Storage ____
Other ____
(b)If Gas Shallow ■ Deep ____
Horizontal ■

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Marcellus Shale: 7,300' TVD, Anticipated Thickness- 50' feet, Associated Pressure- 3,200#

8) Proposed Total Vertical Depth: 7,300' TVD

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 17,400' MD

11) Proposed Horizontal Leg Length: 9,292'

12) Approximate Fresh Water Strata Depths: 29', 40'

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

14) Approximate Saltwater Depths: 427', 1131'

15) Approximate Coal Seam Depths: 92', 136', 686'

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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18) **CASING AND TUBING PROGRAM**

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	20"	New	H-40	94#	90'	90'	CTS, 86 Cu. Ft.
Fresh Water	13-3/8"	New	J-55/H-40	54.5#/ 48#	305'	305'	CTS, 424 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2450'	2450'	CTS, 998 Cu Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	17400'	17400'	4404 Cu Ft.
Tubing	2-3/8"	New	N-80	4.7#		7200'	
Liners							

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	24"	0.438"	1530	Class A	1.18
Fresh Water	13-3/8"	17-1/2"	0.38"/0.33"	2730/1730	Class A	1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	Class A	1.18
Intermediate						
Production	5-1/2"	8-3/4" & 8-1/2"	0.361"	12630	Lead-H/POZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11200		
Liners						

PACKERS

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

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WW-6B
(9/13)

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.

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."

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 9.31 acres

22) Area to be disturbed for well pad only, less access road (acres): 3.71 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% calcium and 1/4 lb flake, 5 gallons of clay treat
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.

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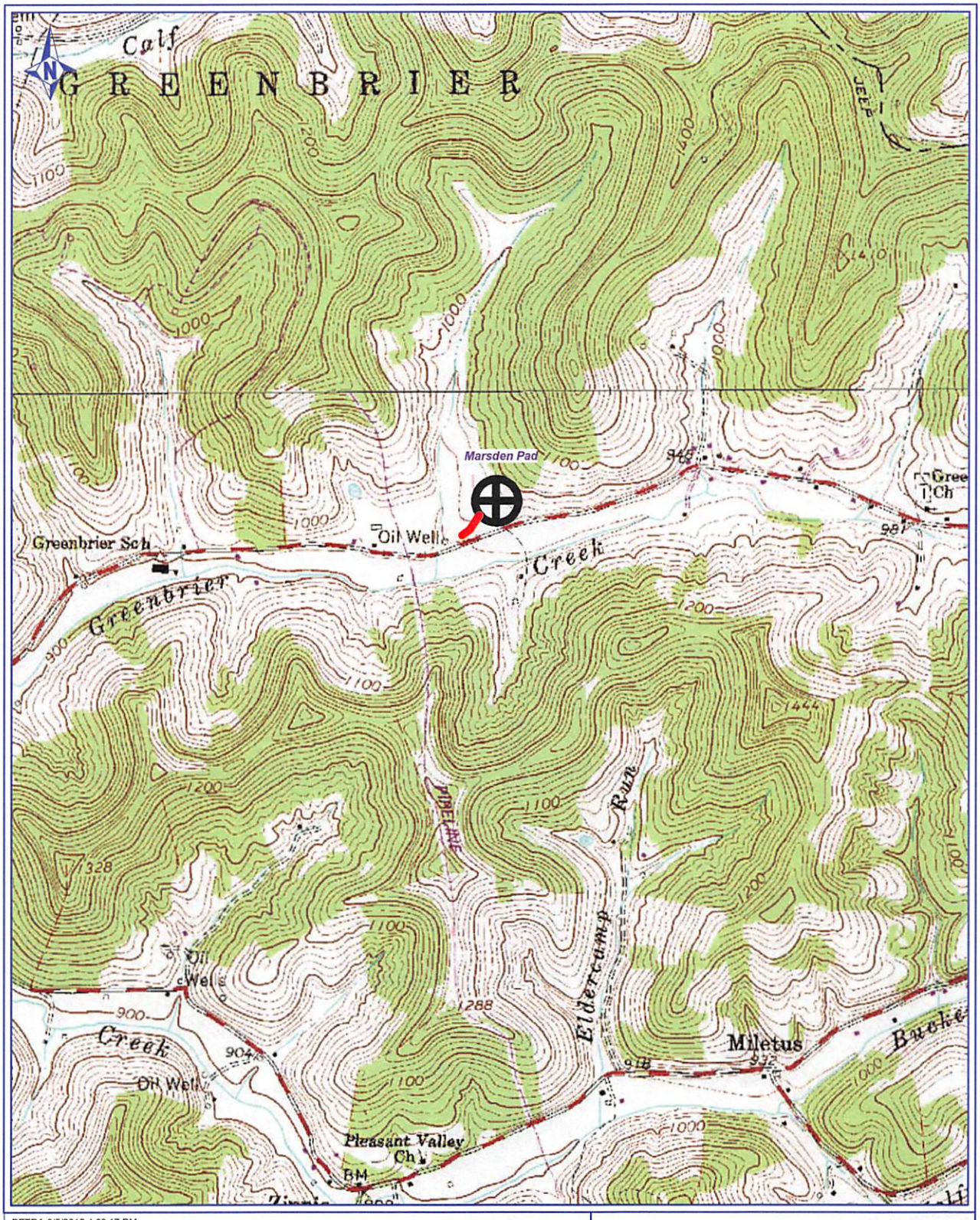
*Note: Attach additional sheets as needed.

17-06183



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17-06183 H6A WELLING UNIT 2H
ANTERO RESOURCES

PAD NAME: Marsden

Antero Resources Corporation

Appalachia Basin

Marsden Pad

Welling Unit 2H

Doddridge County

0 1,596 3,192

FEET

REMARKS
QUADRANGLE: BIGTSAAC
WATERSHED: UPPER MIDDLE ISL CR.
DISTRICT: GREENBRIER

By: ECM

September 5, 2012

RECEIVED
Office of Oil & Gas
DEC 07 2012
Environmental Protection

Antero Resources
Well No. Welling Unit 2H
Antero Resources Corporation

(✦) Denotes Location of Well on United States Topographical Maps

Wellhead Layout
Detail Not to Scale

- White Unit 1H (47-17-6182)
- Welling Unit 1H (47-17-6181)
- **Proposed Welling Unit 2H (47-17-6183)**
- Golden Unit 1H (47-17-6227)
- Golden Unit 2H (47-17-6230)
- Perkins Unit 1H (47-17-6229)
- Flossie Unit 1H (47-17-6180)
- Flossie Unit 2H (47-17-6144)

N 44°41' W
10.0'

915' to Bottom Hole

4,399' to Top Hole
LATITUDE 39 - 15 - 00

Top Hole 7.5' Spot

LONGITUDE 80 - 35 - 00
1,007' to Top Hole

9,797' to Bottom Hole

Bottom Hole 7.5' Spot

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L	Ora Virginia White Lease DAD61820/002
K	Charles W. Wellings Jr., et ux Lease 21312
J	Leo G. King, et ux, Memorandum of Oil and Gas Lease
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A	Margaret J. & William G. Prickett Lease 22045

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28	8/25.2	Timothy J. & Julie R. Goldsmith	273/129	4.61
27	7/14.9	Barbara L. & Charles W. Wellings Jr.	266/588	9.12
26	8/25.1	Thomas Edward & Mary Jo Hickman	282/83	1.00
25	7/14.1	Murray Hill Energy Inc.	279/257	20.0
24	8/25	Pamela Clevenger	WB40/199	1.16
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21	8/34.1	D. Duane & Leah L. Perkins	273/298	0.14
20	7/14.5	Melvin W. & Louise Morris	237/172	0.59
19	7/14.4	Phoonsombat Smith	271/219	1.01
18	8/33	D. Duane & Leah Perkins	227/200	1.10
17	7/46	Charles W. Jr. & Barbara L. Wellings	203/229	Lot #7
16	7/30	Robert Marshall & Vernie Mae Hilling	280/347	-
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11	4/9.1	James M. & Cathy Sue Clark	179/777	1.50
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8	7/51	Trustees of the Eddy Cemetery Assoc.	249/650	1.70
7	7/14.8	William & Lanita Stewart	281/311	1.00
6	7/50	Green Meadow Sewage Treat. Plant	220/449	-
5	7/47	Judith K. Mohr & Rocky L. Romanello	254/459	Lot #6
4	7/49	Howard & Muriel Van Buren	191/192	Lot #4
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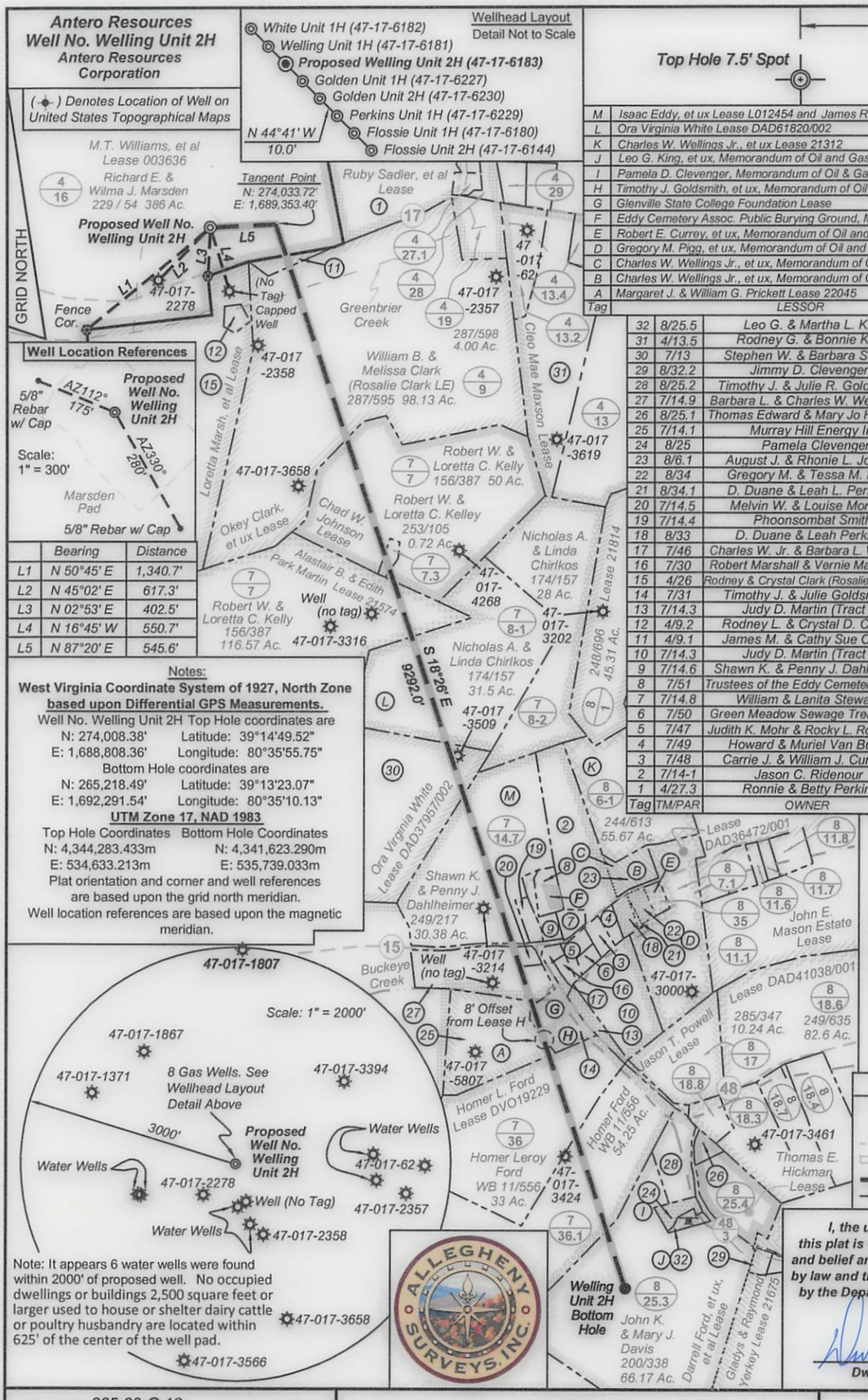

Well Location References

Scale: 1" = 300'

5/8" Rebar w/ Cap — AZ 112° 175' — Proposed Well No. Welling Unit 2H — AZ 330° 280' — Marsden Pad — 5/8" Rebar w/ Cap

	Bearing	Distance
L1	N 50°45' E	1,340.7'
L2	N 45°02' E	617.3'
L3	N 02°53' E	402.5'
L4	N 16°45' W	550.7'
L5	N 87°20' E	545.6'

Notes:

West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.

Well No. Welling Unit 2H Top Hole coordinates are
N: 274,008.38' Latitude: 39°14'49.52"
E: 1,688,808.36' Longitude: 80°35'55.75"
Bottom Hole coordinates are
N: 265,218.49' Latitude: 39°13'23.07"
E: 1,692,291.54' Longitude: 80°35'10.13"

UTM Zone 17, NAD 1983

Top Hole Coordinates	Bottom Hole Coordinates
N: 4,344,283.433m	N: 4,341,623.290m
E: 534,633.213m	E: 535,739.033m

Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

Note: It appears 6 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.

DWAYNE D. MATHENY
LICENSED
No. 2070
STATE OF WEST VIRGINIA
PROFESSIONAL SURVEYOR

SEAL

Legend

- Proposed gas well
- Found Monument (as noted)
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)

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 regulations issued and prescribed by the Department of Environmental Protection.

Dwayne D. Matheny, P.S. 2070

ALLEGHENY SURVEYS, INC.

FILE NO: 235-30-G-12
DRAWING NO: 235-12 Welling 2H Well
SCALE: 1" = 1200'
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: October 17 2013
OPERATOR'S WELL NO. Welling Unit 2H
API WELL NO MOD
47 - 017 - 06183 H6A
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 971' WATERSHED: Greenbrier Creek QUADRANGLE: Big Isaac
DISTRICT: Greenbrier COUNTY: Doddridge
SURFACE OWNER: Richard E. & Wilma J. Marsden ACREAGE: 386
ROYALTY OWNER: M.T. Williams, et al; Chad W. Johnson; Okey Clark, et ux; Homer L. Ford LEASE NO: ACREAGE:
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: 7,300' TVD 17,400' MD

Margaret J. & William G. Prickett; Alastair B. & Edith Park Martin
Ora Virginia White (2); Darrell Ford, et ux, et al
Glenville State College Foundation
Isaac Eddy, et ux & James Romine
DAD37957/002; 22045
DVO19229; 21574
L012454 & DV011162
DAD61820/002; 003636
85
12.18; 92
50; 2.0898; 70
350; 67; 100; 50; 221

WELL OPERATOR: Antero Resources Corporation
ADDRESS: 1625 17th Street
Denver, CO 80202

DESIGNATED AGENT: Dianna Stamper - CT Corporation System
ADDRESS: 5400 D Big Tyler Road
Charleston, WV 25313

Antero Resources
Well No. Welling Unit 2H
Antero Resources Corporation

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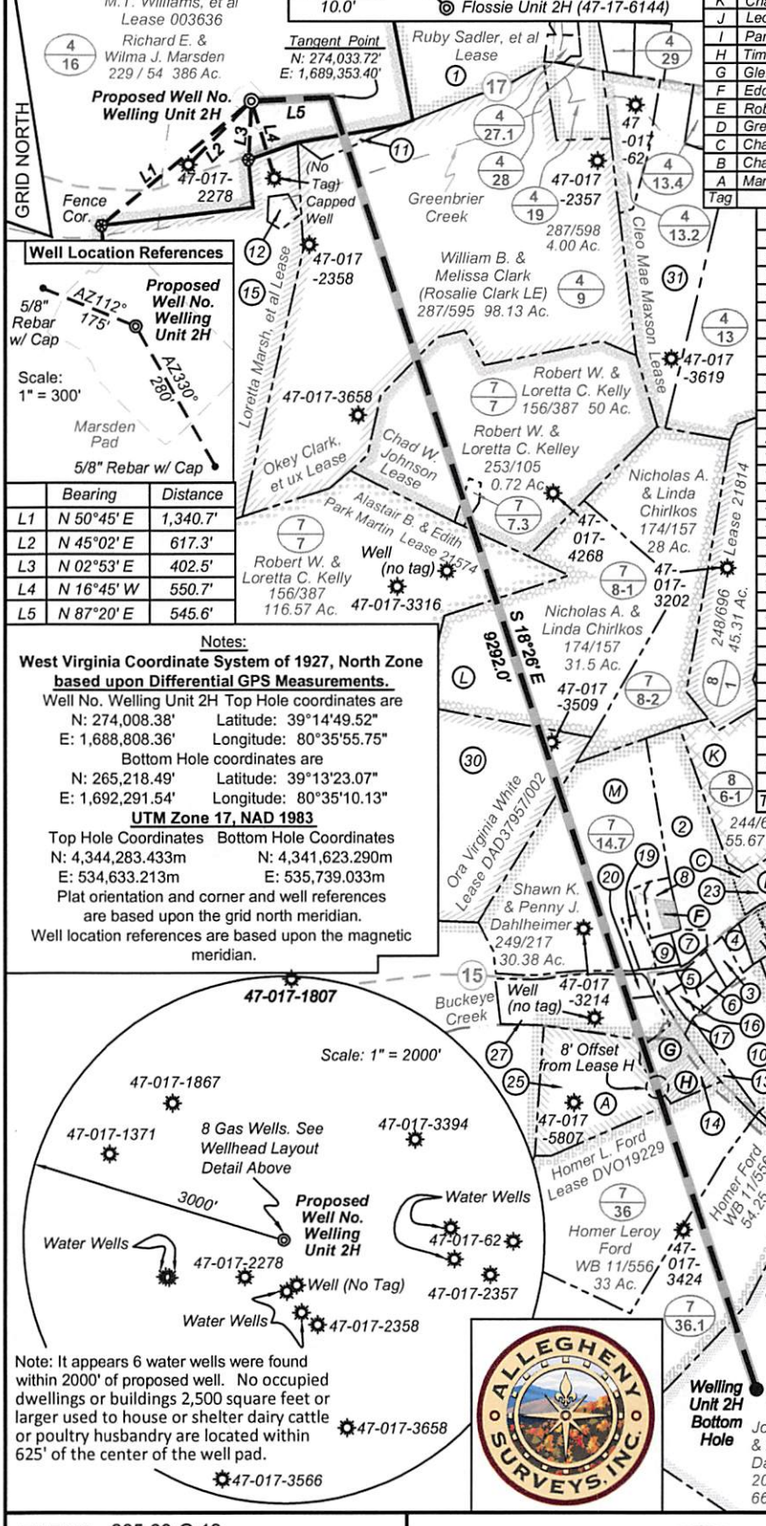

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DWAYNE D. MATHENY LICENSED No. 2070 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

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Glenville State College Foundation
Isaac Eddy, et ux & James Romine
LEASE NO: DAD37957/002; 22045 DVO19229; 21574 L012454 & DV011162 DAD61820/002; 003636
ACREAGE: 386 85 12.18; 92 50; 2.0898; 70
ACREAGE: 350; 67; 100; 50; 221

RECEIVED Office of Oil & Gas OCT 18 2013 W.V. Department of Environmental Protection

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

WW-6A1

Operator's Well Number Welling Unit 2H

API# 47-017-06183 PERMIT MODIFICATION

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
M.T. Williams et al Lease 003636			
M. T. Williams, et ux, et al	The South Penn Oil Company	Flat Rate	0015/0416
The South Penn Oil Company	Hope Natural Gas Company	Assignment	0022/0292
Hope Natural Gas Company	Consolidated Gas Supply Corporation	Merger	DB 0143/0345
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	0135/0583
Consolidated Gas Transmission Corporation	CNG Transmission Corporation	Certificate of Authority	AOI 0051/0795
CNG Transmission Corporation	Dominion Transmission, Inc.	Certificate of Authority	AOI 0058/0362
Dominion Transmission, Inc., DEPI, & DAD, LLC	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0230/0113
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Okey Clark et ux Lease			
Okey Clark, et al	Doran & Associates, Inc.	1/8	0105/0536
Doran & Associates, Inc.	Excel Energy, Inc.	Assignment of Oil and Gas Leases	0153/0584
Excel Energy, Inc.	Sprigg Lane Natural Resources, Inc.	Deed, Assignment and Conveyance	0156/0142
Sprigg Lane Natural Resources, Inc.	Dominion Reserves, Inc.	Assignment	0161/0222
Dominion Reserves, Inc.	CNX Gas Company LLC	Affidavit of Name Changes and Mergers	0293/0252
CNX Gas Company, LLC	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0274/0435
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Chad W. Johnson Lease			
Chad W. Johnson	Tenmile Land, LLC	1/8+	0255/0624
Tenmile Land, LLC	Antero Resources Appalachian Corp.	Assignment	0257/0639
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Alstair B. & Edith Park Martin Lease 21574			
Alstair B. & Edith Martin, h/w	Clarence W. Mutschelknaus	1/8	0135/0004
Clarence W. Mutschelknaus	Bluestone Energy Partners	Assignment	0243/0232
Bluestone Energy Partners	Antero Resources Bluestone, LLC, a wholly owned subsidiary of Antero Resources Appalachian Corporation	Merger	DB 0288/0001
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Ora Virginia White Lease DAD61820/002			
Ora Virginia White	Dominion Appalachian Development, LLC	1/8	0176/0628
Dominion Appalachian Development, LLC , DEPI., & DTI, Inc.	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0230/0113
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Ora Virginia White Lease DAD37957/002			
Ora Virginia White	Scott Oil Company	1/8	0147/0188
Scott Oil Company	Dominion Energy, Inc.	Assignment	0154/0648
Dominion Energy, Inc.	Dominion Reserves, Inc.	Assignment	0156/0581
Dominion Reserves, Inc.	CNX Gas Company, LLC	Name Change & Merger	DB 0292/0469
CNX Gas Company, LLC	Antero Resources Appalachian Corporation	Assignment	0260/0631
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Isaac Eddy et ux Lease L012454 and James Romine Lease DV011162			
Dominion Exploration & Production, Inc.	Dominion Appalachian Development, LLC	1/8	0230/0326
Dominion Appalachian Development, LLC , DEPI., & DTI, Inc.	Antero Resources Appalachian Corporation	Assignment	0231/0145
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Issac Eddy & C. A. Eddy, h/w	J. F. Randolph	Flat Rate	0017/0031
J. F. Randolph	M. Keating	Assignment	0016/0162
M. Keating, et al	Southern Oil Company	Assignment	0022/0059
Southern Oil Company	C. A. F. Randolph & L. D. Lowther, DBA Randolph & Lowther	Assignment	0035/0283
C. A. F. Randolph & L. D. Lowther, DBA Randolph & Lowther	Ernest Randolph	Assignment	0035/0281
Ernest Randolph	Louis Borgenicht	Assignment	0036/0413

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WV Department of
Environmental Protection

***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 Welling Unit 2H

API# 47-017-06183 PERMIT MODIFICATION

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Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
Isaac Eddy et ux Lease L012454 and James Romine Lease DV011162 CONTINUED			
Louis Borgenicht	Max Deutsch	Assignment	0037/0034
Max Deutsch	Champion Oil & Gas Company	Assignment	0037/0037
Champion Oil & Gas Company	Majestic Oil & Gas Company	Assignment	0043/0400
Majestic Oil & Gas Company	W. A. Beren, et al	Assignment	0043/0398
W. A. Beren, et al	Godfrey L. Cabot, Inc.	Assignment	0087/0157
Godfrey L. Cabot, Inc.	Hope Natural Gas Company	Assignment	0089/0217
Hope Natural Gas Company	Consolidated Gas Supply Corporation	Merger	0143/0345
Consolidated Gas Supply Corporation	Hope Gas, Inc.	Article of Incorporation	Exhibit 2
Hope Gas, Inc.	CNG Producing Company	Assignment	0178/0036
CNG Producing Company	Dominion Exploration & Production, Inc.	Certificate of Authority	AOI 0058/0366
Dominion Exploration & Production, Inc., DTI, Inc. & DAD, LLC	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0230/0113
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Margaret J. and William G. Prickett Lease 22045			
Margaret J. Pricket, et vir	Clarence W. Mutschelknaus	1/8	0214/0214
Clarence W. Mutschelknaus	Bluestone Energy Partners	Assignment	0250/0654
Bluestone Energy Partners	Antero Resources Bluestone, LLC, a wholly owned subsidiary of Antero Resources Appalachian Corporation	Affidavit Regarding Merger	0288/0001
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Glenville State College Foundation Lease			
Glenville State College Alumni Foundation, Inc.	Clarence W. Mutschelknaus	1/8	0231/0029
Clarence W. Mutschelknaus	Bluestone Energy Partners	Assignment	0250/0654
Bluestone Energy Partners	Antero Resources Bluestone, LLC, a wholly owned subsidiary of Antero Resources Appalachian Corporation	Affidavit Regarding Merger	0288/0001
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Timothy J. Goldsmith et ux Memorandum of Oil and Gas Leases			
Timothy J. Goldsmith, et ux	Antero Resources Appalachian Corporation	1/8+	0274/0543
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**
Homer L. Ford Lease DV019229			
Homer L. Ford	Consolidated Gas Supply Corporation	1/8	0100/0423
Consolidated Gas Supply Corporation	Consolidated Gas Transmission Corporation	Assignment	0135/0583
Consolidated Gas Transmission Corporation	CNG Transmission Corporation	Certificate of Authority	AOI 0051/0795
CNG Transmission Corporation	Dominion Transmission, Inc.	Certificate of Authority	AOI 0058/0362
Dominion Transmission, Inc., DEPI, & DAD, LLC	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0230/0113
Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**

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

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WV Department of
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WW-6A1
(5/13)

Operator's Well No. Welling Unit 2H

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
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Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Darrell Ford et ux et al Lease				
	Darrell Ford, et ux	Clarence W. Mutschelknaus	1/8	0241/0518
	Clarence W. Mutschelknaus	Antero Resources Appalachian Corporation	Assignment	0275/0566
	Antero Resources Appalachian Corporation	**Antero Resources Corporation**	**Name Change**	**Exhibit 1**

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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: Kevin Kilstrom
Its: Vice President of Production

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Office of Oil and Gas
NOV 0 8 2013
WV Department of
Environmental Protection

FORM WW-6A1
EXHIBIT 1

17-06183 MOD

FILED
JUN 10 2013
IN THE OFFICE OF SECRETARY OF STATE

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

Penney Barker, Manager
Corporations Division
Tel: (304)558-8000
Fax: (304)558-8381
Website: www.wvsos.com
E-mail: business@wvsos.com

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

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

APPLICATION FOR AMENDED CERTIFICATE OF AUTHORITY

****** 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 statement:**

1. Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian 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 — Contact Name
   (303) 357-7310 — Phone Number

7. **Signature information** (See below **Important Legal Notice Regarding Signature*):

   Print Name of Signer: Alvyn A. Schopp Title/Capacity: Authorized Person

   Signature: [signature] Date: June 10, 2013

**Important Legal Notice Regarding Signature*: Per West Virginia Code §31D-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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Office of Oil and Gas
NOV 08 2013
WV Department of
Environmental Protection

FORM WW-6A1
EXHIBIT 2

17-06183
MOD

State of West Virginia

STATE OF WEST VIRGINIA
MONTANI SEMPER LIBERI

CERTIFICATE

I, A. James Manchin, Secretary of State of the State of West Virginia, hereby certify that

I have received in my office, duplicate originals of

ARTICLES OF AMENDMENT TO THE ARTICLES OF INCORPORATION

of CONSOLIDATED GAS SUPPLY CORPORATION

The said Articles of Amendment were duly signed and verified pursuant to provisions of Chapter 31, Article 1, Section 31 of the official Code of West Virginia, 1931, as amended, and are hereby found to conform to law. Accordingly therefore, I now issue this

CERTIFICATE OF AMENDMENT TO THE ARTICLES OF INCORPORATION

of the hereinabove named corporation, changing its corporate name to

HOPE GAS, INC.

and I attach hereto, a duplicate original of said Articles of Amendment, and DECREASE.

GOD SAVE THE PRECIOUS STATE OF WEST VIRGINIA!

Given under my hand and the Great Seal of the said State at the City of Charleston, this

SIXTH *day of*

JUNE *19* 84

A. James Manchin
Secretary of State

Official Form c

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Office o
NOV
WV De
Environme

17-06183 MOD

WW-60
(7-01)

DATE: November 7, 20 13
OPERATOR'S
WELL NO. Welling Unit 2H

API NO: 47- 017 06183
State County Permit No.

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

A F F I D A V I T

State of Colorado

County of Denver

I, Tim Rady (the designated owner or operator, or authorized representative thereof), after being duly sworn, do declare that the undersigned is authorized by the owner of the working interest in the well permit application to which this affidavit is attached to state that (he, she, or it) shall tender to the owner of the oil and gas in place not less than one-eighth of the total amount paid to or received by or allowed to the owner of the working interest at the wellhead for the oil or gas so extracted, produced, or marketed before deducting the amount to be paid or set aside for the owner of the oil or gas in place, or all such oil or gas to be extracted, produced, or marketed from the well. West Virginia Code 22-6-8(e).

Signed: [signature]

Taken, subscribed and sworn to before me this 7 day of Nov, 20 13.

[signature]
Notary Public

My Commission expires: 11/9/2016

RECEIVED
Office of Oil and Gas
NOV 8 2013
WV Department of
Environmental Protection

LISA BOTTINELLI
Notary Public
State of Colorado
Notary ID 20124072365
My Commission Expires Nov 9, 20