Instrument Volum 201300058250 OR 21

HECEIPT# 43592

201300058250
Filed for Record in
NOBLE COUNTY, OHID
JUANITA MATHEMEY, RECORDER
02-22-2013 At 02:00 pm.
MEMORANDUM 68.00
OR Volume 219 Page 167 - 173

201300058250 TURNER DIL BENNER PICKUP

# **MEMORANDUM OF OIL AND GAS LEASE**

This Memorandum of Oil and Gas Lease made this 21st day of February, 2013 by and between Muskingum Watershed Conservancy District, hereinafter collectively call "Lessor", and Antero Resources Appalachian Corporation, whose address is 1625 17th Street, Denver, CO 80202, hereinafter called "Lessee".

# WITNESSETH

For and in consideration of the sum of Ten Dollars (\$10.00) cash in hand paid, and other good and valuable consideration, Lessor did make and execute in favor of Lessee, an Oil and Gas Lease dated February 21<sup>st</sup>, 2013, and made effective: February 21<sup>st</sup>, 2013.

# LEGAL DESCRIPTION

# See Exhibit B, attached hereto and made a part hereof

Containing 6,553.3391 acres, more or less, located in the Township of Richland, County of Guernsey, and Townships Beaver, Seneca, Marion and Wayne, County of Noble, State of Ohio, for the purpose of drilling, operating for, producing and removing oil and gas. The Lease has an initial term of five (5) years plus one (1) five (5) year option to extend the primary term.

This Memorandum of Oil and Gas Lease is being made and filed for the purpose of giving third parties notice of the existence of the lease described above. The execution, delivery and recordation of this Memorandum of Oil and Gas Lease shall have no effect upon, and is not intended as an amendment of the terms and conditions of the Lease.

THE REMAINDER OF THIS PAGE WAS INTENTIONALLY LEFT BLANK

In witness whereof this Memorandum of Oil and Gas Lease is executed as of the date first above written.

WITNESS:

LESSOR:

Muskingum Watershed Conservancy District
John Hoopingarner, Executive Director/Secretary

WITNESS: LESSEE:

Name: Chis Trent
Title: Land Manager

# **ACKNOWLEDGEMENT**

STATE OF Ohio )
COUNTY OF JUSCARAWAS )

On this, the <u>alst</u> day of <u>Forman</u>, 2013, before me, the undersigned officer, personally appeared <u>John Hoopingarner</u>, known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Signature/Notary Public: Levece of Warfield
Name/ Notary Public (print): Rebecce of warfield

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: April 2 of Market of Signature/Notary Public: Rucker of Writhold Name/ Notary Public (print): Resected of unrefield

Prepared By: Antero Resources Appalachian Corporation 1625 17<sup>th</sup> Street Denver, CO 80202 Return To: Turner Oil and Gas Properties, Inc. 44510 Marietta Road Caldwell, OH 43724

**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

129-295(DR)	11.4500	11,4500	7	8	26	Beaver	Noble	010021313000	N-142-S
183-438(DR)	15.0000	15.0000	1	1	ML6	Richland	Guernsey	310002730000	G-71-S
241-473(DR)	38,2000	38.2000	1	1	ML 34	Richland	Guernsey	310002723000	G-14-S
334-513(DR)	43.1000	43.1000	1	12	ML 32	Richland	Guernsey	320000213000	G-8-S
334-513(DR)	28.1000	28.1000	₽	1	ML 32	Richland	Guernsey	320000213000	G-11-S
168-538(DR)	21.2000	21.2000	1	1	ML 32	Richland	Guernsey	320000213000	G-16-S
168-547(DR)	5.0000	5.0000	1	1	ML 31	Richland	Guernsey	310002723000	G-18-S
168-558(DR)	27.5710	51.0000	1	1	ML3	Richland	Guernsey	None	G-68.5-S
168-558(DR)	15.5632	48.5000	1	ъ	ML3	Richland	Guernsey	None	G-68-S
168-558(DR)	1.9995	2.0000	1	ב	ML3	Richland	Guernsey	None	G-67.5-S
82-482(CPR)	8.4700	8.4700	1	L)	ML 29	Richland	Guernsey	310002703000	G-21-S
82-482(CPR)	99.4500	99,4500	1	1	ML 20	Richland	Guernsey	310002731000	G-24-S
168-558(DR)	3.5736	88.2000	1	1	ML 2	Richland	Guernsey	None	G-67-S
175-365(DR)	90.6000	90.6000	1	1	ML 19	Richland	Guernsey	310002706000	G-25-S
168-538(DR)		12.5000	1	1	ML 19	Richland	Guernsey	310002706000	G-26-S
168-538(DR)	77.2833	101.5000	1	1	ML 18	Richland	Guernsey	310002733000	G-27-S
168-538(DR)	106.2000	106.2000	1	1	ML 17	Richland	Guernsey	310002710000	G-28-S
81-9(CPR)		102.1000	1	1	ML 16	Richland	Guernsey	310000359000	G-29-S
168-558(DR)	56,8596	79.4000	1	1	ML 15	Richland	Guernsey	310002719000	G-31-S
81-9(CPR)	20.0000	20.0000	1	1	ML 15	Richland	Guernsey	310002719000	G-30-S
168-558(DR)	46,2431	95.1000	1	1	ML 14	Richland	Guernsey	310002713000	G-32-S
168-558(DR)	6.5495	7.1000	1	1	ML 14	Richland	Guernsey	310002713000	G-32.5-S
82-482(CPR)	63,0000	63.0000	1	1	ML 13	Richland	Guernsey	310002735000	G-34-S
168-373(DR)		25.0000	1	1	ML 13	Richland	Guernsey	310002735000	G-35-S
172-533(DR)	57.7000	57.7000	1	1	ML 12	Richland	Guernsey	310002733000	G-38-S
172-480(DR)	20,6000	20.6000	1	1	ML 12	Richland	Guernsey	310002733000	G-36-S
172-396(DR)	11,4000	11,4000	1	1	ML 11 & 12	Richland	Guernsey	310002733000	G-37-S
172-396(DR)		7.5000	1	1	ML 11 & 12	Richland	Guernsey	310002733000	G-37-S
172-533(DR)		62.3000	1	1	ML 11	Richland	Guernsey	310002732000	G-39-S
Deed	Leasehold Acres	Iract Gross Acres	(#)	(#)	Lot (#)	Township	County	Parcei Number	INIMACID Acq ID
Source	MWCD Net	T	Range	TWP	Section or Military	T		Daniel Name	

# **EXHIBIT B**

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

MWCD Acq ID         Parcel Number         County         Township         Section or Millitary (b)         TVP (b)         Range (b)         Tract Gross Acres           N-143-S         010050042000         Noble         Beaver         26         8         7         11.8600           N-134-S         010050040000         Noble         Beaver         26         8         7         31.3000           N-134-S         010050040000         Noble         Beaver         31         8         7         21.4600           N-134-S         010050040000         Noble         Beaver         31         8         7         21.4600           N-135-S         010050041000         Noble         Beaver         32         8         7         23.5000           N-135-S         010050041000         Noble         Marion         36         7         7         23.5000           N-156-S         23002110900         Noble         Marion         36         7         7         3.5000           N-156-S         23002110900         Noble         Marion         36         7         7         3.5000           N-156-S         23002110900         Noble         Seneca         13         8         <										
01005042000         Noble         Beaver         26         8         7           None         Noble         Beaver         26         8         7           010050039000         Noble         Beaver         31         8         7         3           010050040000         Noble         Beaver         31         8         7         3           010050043000         Noble         Beaver         32         8         7         3           010050041000         Noble         Beaver         32         8         7         3           010050041000         Noble         Beaver         32         8         7         7           23002110900         Noble         Marion         36         7         7         3           230021092000         Noble         Marion         36         7         7         4           23002109200         Noble         Marion         36         7         7         4           23002120200         Noble         Seneca         13         8         8         8         11           31002120200          Noble         Seneca         13         8         8         11 <th>MWCD Acq ID</th> <th>Parcel Number</th> <th>County</th> <th>Township</th> <th>Section or Military</th> <th>TWP</th> <th>Range (#)</th> <th>Tract Gross Acres</th> <th>MWCD Net</th> <th>Source</th>	MWCD Acq ID	Parcel Number	County	Township	Section or Military	TWP	Range (#)	Tract Gross Acres	MWCD Net	Source
None         Noble         Beaver         26         8         7           010050030000         Noble         Beaver         31         8         7         31           010050040000         Noble         Beaver         31         8         7         31           01005034000         Noble         Beaver         32         8         7         32           01005041000         Noble         Beaver         32         8         7         4           01005041000         Noble         Beaver         32         8         7         7           230021104000         Noble         Marion         36         7         7         3           230021199000         Noble         Marion         36         7         7         3           2300211992000         Noble         Marion         36         7         7         3           2300211992000         Noble         Marion         36         7         7         3           310021202000         Noble         Seneca         13         8         8         11           31002129000         Noble         Seneca         13         8         8         11	N-143-S	010050042000	Noble	Beaver	26	∞ [	7	11.8600	11.8600	95-309(DR)
010050039000         Noble         Beaver         31         8         7           01005040000         Noble         Beaver         31         8         7         31           01005003101000         Noble         Beaver         32         8         7         3           010050041000         Noble         Beaver         32         8         7         3           230021104000         Noble         Marion         30         7         7         3           230021102000         Noble         Marion         36         7         7         3           230021102000         Noble         Seneca         13         8         8         8           310021202000         Noble         Seneca         13         8         8         11           31002125000         Noble         Seneca         13         8         8         11	N-142-S	None	Noble	Beaver	26	œ	7	31.3000	31.3000	90-121(DR)
010050040000         Noble         Beaver         31         8         7           010021311000         Noble         Beaver         32         8         7         1           010050038000         Noble         Beaver         32         8         7         1           010050041000         Noble         Beaver         32         8         7         2           010050041000         Noble         Marion         30         7         7         2           230021104000         Noble         Marion         36         7         7         3           2300211092000         Noble         Marion         36         7         7         3           2300211092000         Noble         Marion         36         7         7         3           310021202000         Noble         Seneca         13         8         8         8           310021202000         Noble         Seneca         13         8         8         11           31002120000         Noble         Seneca         13         8         8         11           31002125000         Noble         Seneca         14         8         8         11	N-131-S	010050039000	Noble	Beaver	31	8	7	10.4000	10.4000	89-293(DR)
010021311000         Noble         Beaver         32         8         7         32           010050041000         Noble         Beaver         32         8         7         4           010050041000         Noble         Beaver         32         8         7         4           230021104000         Noble         Marion         30         7         7         7           230021100000         Noble         Marion         36         7         7         3           230021102000         Noble         Marion         36         7         7         3           230021102000         Noble         Marion         36         7         7         3           230021102000         Noble         Marion         36         7         7         3           310021202000         Noble         Seneca         13         8         8         11           310021205000         Noble         Seneca         13         8         8         11           310021205000         Noble         Seneca         14         8         8         11           310021205000         Noble         Seneca         14         8	N-155-S	010050040000	Noble	Beaver	31	8	7	21,4600	21.4600	94-81(DR)
010050038000         Noble         Beaver         32         8         7         6           010050041000         Noble         Beaver         33         8         7         2           230021104000         Noble         Marion         30         7         7         7           23002110000         Noble         Marion         36         7         7         7           230021102000         Noble         Marion         36         7         7         3           230021092000         Noble         Marion         36         7         7         3           230021092000         Noble         Marion         36         7         7         3           31002102000         Noble         Seneca         13         8         8         8           31002120000         Noble         Seneca         13         8         8         10           31002120000         Noble         Seneca         13         8         8         11           31002129000         Noble         Seneca         14         8         8         11           31002129000         Noble         Seneca         14         8         8	N-134-S	010021311000	Noble	Beaver	32	80	7	14.9000	14.9000	123-59(DR)
010050041000         Noble         Beaver         33         8         7         3           230021104000         Nuble         Marion         30         7         7         7           230021104000         Nuble         Marion         36         7         7         7           230021109000         Nuble         Marion         36         7         7         7           230021109000         Nuble         Marion         36         7         7         3           230021109000         Nuble         Seneca         13         8         8         8           310021204000         Nuble         Seneca         13         8         8         8           310021204000         Nuble         Seneca         13         8         8         11           310021205000         Nuble         Seneca         13         8         8         11           31002120600         Nuble         Seneca         13         8         8         11           31002129600         Nuble         Seneca         14         8         8         11           31002129000         Nuble         Seneca         14         8         8 </td <td>N-135-S</td> <td>010050038000</td> <td>Noble</td> <td>Beaver</td> <td>32</td> <td><b>∞</b></td> <td>7</td> <td>60.7000</td> <td>60.7000</td> <td>90-121(DR)</td>	N-135-S	010050038000	Noble	Beaver	32	<b>∞</b>	7	60.7000	60.7000	90-121(DR)
230021104000         Noble         Marion         30         7         7           230021101000         Noble         Marion         36         7         7         7           2300211099000         Noble         Marion         36         7         7         3           230021099000         Noble         Marion         36         7         7         3           230021092000         Noble         Marion         36         7         7         3           230021092000         Noble         Seneca         13         8         8         8           31002120000         Noble         Seneca         13         8         8         9           31002120000         Noble         Seneca         13         8         8         11           31002129000         Noble         Seneca         13         8         8         11           31002129000         Noble         Seneca         14         8         8         11           31002129000         Noble         Seneca         14         8         8         3           31002129000         Noble         Seneca         14         8         8         3	N-139-S	010050041000	Noble	Beaver	. 33	8	7	23.6000	23.6000	90-121(DR)
230021101000         Noble         Marion         36         7         7           230021099000         Nuble         Marion         36         7         7         3           230021099000         Nuble         Marion         36         7         7         3           230021092000         Nuble         Seneca         13         8         8         8           310021092000         Nuble         Seneca         13         8         8         9           310021092000         Nuble         Seneca         13         8         8         10           31002109000         Nuble         Seneca         13         8         8         11           31002129000         Nuble         Seneca         13         8         8         11           31002129000         Nuble         Seneca         14         8         8         11           31002129000         Nuble         Seneca         14         8         8         11           31002129000         Nuble         Seneca         14         8         8         3           31002129000         Nuble         Seneca         14         8         8         3 <td>N-165-S</td> <td>230021104000</td> <td>Nobie</td> <td>Marion</td> <td>30</td> <td>7</td> <td>7</td> <td>6.3000</td> <td>6.3000</td> <td>89-618(DR)</td>	N-165-S	230021104000	Nobie	Marion	30	7	7	6.3000	6.3000	89-618(DR)
230021099000         Noble         Marion         36         7         7           230021100000         Noble         Marion         36         7         7         3           2300211092000         Noble         Marion         36         7         7         3           230021092000         Noble         Seneca         13         8         8         10           310021202000         Noble         Seneca         13         8         8         10           310021202000         Noble         Seneca         13         8         8         10           310021205000         Noble         Seneca         13         8         8         11           310021198000         Noble         Seneca         14         8         8         11           31002129000         Noble         Seneca         14         8         8         11           31002129000         Noble         Seneca         14         8         8         1           31002129000         Noble         Seneca         14         8         8         3           31002129000         Noble         Seneca         14         8         8         3	N-158-S	230021101000	Noble	Marion	36	7	7	3.5000	3.5000	89-573(DR)
230021100000         Noble         Marion         36         7         7           230021092000         Noble         Marion         36         7         7           230021092000         Noble         Seneca         13         8         8           310021202000         Noble         Seneca         13         8         8         1           310021204000         Noble         Seneca         13         8         8         1           310021205000         Noble         Seneca         13         8         8         1           310021205000         Noble         Seneca         13         8         8         1           31002129000         Noble         Seneca         14         8         8         1           31002124000         Noble         Seneca         14         8         8         1           31002124000         Noble         Seneca         14         8         8         1           31002125000         Noble         Seneca         14         8         8         8           31002122000         Noble         Seneca         14         8         8         8           310021236	N-156-S	230021099000	Noble	Marion	36	7	7	11.2000	11.2000	89-618(DR)
230021092000         Noble         Marion         36         7         7           310021202000         Noble         Seneca         13         8         8           310021202000         Noble         Seneca         13         8         8           310021202000         Noble         Seneca         13         8         8         1           310021205000         Noble         Seneca         13         8         8         1           310021205000         Noble         Seneca         13         8         8         1           310021295000         Noble         Seneca         14         8         8         1           31002124000         Noble         Seneca         14         8         8         1           31002124000         Noble         Seneca         14         8         8         8           31002127000         Noble         Seneca         14         8         8         8           31002123000         Noble         Seneca         14         8         8         8           31002123000         Noble         Seneca         14         8         8         8           310021250	N-159-S	230021100000	Noble	Marion	36	7	7	38.6600	38.6600	94-81(DR)
310021202000         Noble         Seneca         13         8         8           310051061000         Noble         Seneca         13         8         8           310051062000         Noble         Seneca         13         8         8         1           310021204000         Noble         Seneca         13         8         8         1           310021205000         Noble         Seneca         13         8         8         1           310021198000         Noble         Seneca         13         8         8         1           310021198000         Noble         Seneca         14         8         8         1           310021226000         Noble         Seneca         14         8         8         1           310021224000         Noble         Seneca         14         8         8         8           310021227000         Noble         Seneca         14         8         8         8           31002129000         Noble         Seneca         14         8         8         8           31002129000         Noble         Seneca         14         8         8         8	N-161-S	230021092000	Noble	Marion	36	7	7	40.0000	40.0000	89-220(DR)
310051061000         Noble         Seneca         13         8         8         1           310051062000         Noble         Seneca         13         8         8         1           310021204000         Noble         Seneca         13         8         8         1           310021205000         Noble         Seneca         13         8         8         1           310021198000         Noble         Seneca         14         8         8         1           310021226000         Noble         Seneca         14         8         8         1           310021226000         Noble         Seneca         14         8         8         1           310021224000         Noble         Seneca         14         8         8         8           310021227000         Noble         Seneca         14         8         8         8           310021223000         Noble         Seneca         14         8         8         8           310021295000         Noble         Seneca         14         8         8         8           31002129600         Noble         Seneca         15         8         8 <td>N-98-S</td> <td>310021202000</td> <td>Noble</td> <td>Seneca</td> <td>13</td> <td>8</td> <td>8</td> <td>88.9000</td> <td>88.9000</td> <td>92-536(DR)</td>	N-98-S	310021202000	Noble	Seneca	13	8	8	88.9000	88.9000	92-536(DR)
310051062000         Noble         Seneca         13         8         8         1           310021204000         Noble         Seneca         13         8         8         1           310021205000         Noble         Seneca         13         8         8         1           310021198000         Noble         Seneca         14         8         8         1           310021226000         Noble         Seneca         14         8         8         1           310021226000         Noble         Seneca         14         8         8         8           310021226000         Noble         Seneca         14         8         8         8           310021227000         Noble         Seneca         14         8         8         8           310021223000         Noble         Seneca         14         8         8         8           310021229000         Noble         Seneca         14         8         8         8           310021229000         Noble         Seneca         14         8         8         8           310021298000         Noble         Seneca         15         8         8 <td>N-99-S</td> <td>310051061000</td> <td>Noble</td> <td>Seneca</td> <td>13</td> <td>8</td> <td>80</td> <td>99.7500</td> <td>99.7500</td> <td>92-422(DR)</td>	N-99-S	310051061000	Noble	Seneca	13	8	80	99.7500	99.7500	92-422(DR)
310021204000         Noble         Seneca         13         8         8         1           310021205000         Noble         Seneca         13         8         8         1           310021198000         Noble         Seneca         14         8         8         1           310021226000         Noble         Seneca         14         8         8         8         1           310021226000         Noble         Seneca         14         8         8         8         8         8           310021226000         Noble         Seneca         14         8         <	N-100-S	310051062000	Noble	Seneca	13	8	8	103.8000	103.8000	93-26(DR)
310021205000         Noble         Seneca         13         8         8         1           310021198000         Noble         Seneca         14         8         8         8           310021198000         Noble         Seneca         14         8         8         8           310021226000         Noble         Seneca         14         8         8         8           310021224000         Noble         Seneca         14         8         8         8           310021224000         Noble         Seneca         14         8         8         8           310021227000         Noble         Seneca         14         8         8         8           310021223000         Noble         Seneca         14         8         8         8           310021295000         Noble         Seneca         14         8         8         8           310021298000         Noble         Seneca         15         8         8         8           310021298000         Noble         Seneca         15         8         8         8           310021298000         Noble         Seneca         15         8         8 <td>N-96-S</td> <td>310021204000</td> <td>Noble</td> <td>Seneca</td> <td>13</td> <td>8</td> <td>8</td> <td>119.2400</td> <td>119.2400</td> <td>92-538(DR)</td>	N-96-S	310021204000	Noble	Seneca	13	8	8	119.2400	119.2400	92-538(DR)
310021198000         Noble         Seneca         14         8         8           310021198000         Noble         Seneca         14         8         8           310021226000         Noble         Seneca         14         8         8           310021224000         Noble         Seneca         14         8         8           310021227000         Noble         Seneca         14         8         8           310021223000         Noble         Seneca         14         8         8           310021223000         Noble         Seneca         14         8         8           310021223000         Noble         Seneca         14         8         8           310021295000         Noble         Seneca         14         8         8           310021296000         Noble         Seneca         15         8         8           31002118000         Noble         Seneca         15         8         8           31002118000         Noble         Seneca         15         8         8	N-97-S	310021205000	Noble	Seneca	13	8	8	120.0000	120.0000	93-29(DR)
310021198000         Noble         Seneca         14         8         8           310021226000         Noble         Seneca         14         8         8           310021224000         Noble         Seneca         14         8         8           310021224000         Noble         Seneca         14         8         8           310021227000         Noble         Seneca         14         8         8           310021223000         Noble         Seneca         14         8         8           31002122000         Noble         Seneca         14         8         8           310021295000         Noble         Seneca         15         8         8           310021298000         Noble         Seneca         15         8         8           31002118000         Noble         Seneca         15         8         8	N-91-S	310021198000	Noble	Seneca	14	8	8	1.3100	1.3100	107-489(DR)
310021226000         Noble         Seneca         14         8         8           310021224000         Noble         Seneca         14         8         8           310021224000         Noble         Seneca         14         8         8           310021227000         Noble         Seneca         14         8         8           310021223000         Noble         Seneca         14         8         8           310021295000         Noble         Seneca         14         8         8           310021296000         Noble         Seneca         15         8         8           31002118000         Noble         Seneca         15         8         8           31002118000         Noble         Seneca         15         8         8	N-91-S	310021198000	Noble	Seneca	14	8	8	16.8600	16.8600	89-121(DR)
310021224000         Noble         Seneca         14         8         8           310021199000         Noble         Seneca         14         8         8           310021227000         Noble         Seneca         14         8         8           310021223000         Noble         Seneca         14         8         8           310021223000         Noble         Seneca         14         8         8           310021295000         Noble         Seneca         15         8         8           310021296000         Noble         Seneca         15         8         8           31002118000         Noble         Seneca         15         8         8	N-89-S	310021226000	Noble	Seneca	14	8	8	31.1000	31.1000	92-144(DR)
310021199000         Noble         Seneca         14         8         8           310021227000         Noble         Seneca         14         8         8           310021223000         Noble         Seneca         14         8         8           310021222000         Noble         Seneca         14         8         8           310021295000         Noble         Seneca         15         8         8           310021298000         Noble         Seneca         15         8         8           31002118000         Noble         Seneca         15         8         8	N-85-S	310021224000	Noble	Seneca	14	8	8	40.0000	40.0000	90-86(DR)
310021227000         Noble         Seneca         14         8         8           310021223000         Noble         Seneca         14         8         8           310021222000         Noble         Seneca         14         8         8           310021295000         Noble         Seneca         15         8         8           310021296000         Noble         Seneca         15         8         8           31002118000         Noble         Seneca         15         8         8           31002118000         Noble         Seneca         15         8         8	N-88-S	310021199000	Noble	Seneca	14	8	8	50.0000	25.3000	90-194(DR)
310021223000     Noble     Seneca     14     8     8       310021222000     Noble     Seneca     14     8     8       310021295000     Noble     Seneca     15     8     8       310021296000     Noble     Seneca     15     8     8       310021298000     Noble     Seneca     15     8     8       310021118000     Noble     Seneca     24     8     8	N-90-S	310021227000	Noble	Seneca	14	8	8	50.9000	50,9000	92-101(DR)
310021222000     Noble     Seneca     14     8     8       310021295000     Noble     Seneca     15     8     8       310021296000     Noble     Seneca     15     8     8       310021298000     Noble     Seneca     15     8     8       310021118000     Noble     Seneca     24     8     8	N-87-S	310021223000	Noble	Seneca	14	8	8	78.0000	78.0000	94-6(DR)
310021295000     Noble     Seneca     15     8     8       310021296000     Noble     Seneca     15     8     8     1       310021298000     Noble     Seneca     15     8     8     7       310021118000     Noble     Seneca     24     8     8     7	N-86-S	310021222000	Noble	Seneca	14	8	8	78.9000	78.9000	90-86(DR)
310021296000         Noble         Seneca         15         8         8         1           310021298000         Noble         Seneca         15         8         8         7           310021118000         Noble         Seneca         24         8         8         7	N-87-S	310021295000	Noble	Seneca	15	8	8	2.0000	2,0000	94-6(DR)
310021298000         Noble         Seneca         15         8         8         7           310021118000         Noble         Seneca         24         8         8         8	N-84-S	310021296000	Noble	Seneca	15	8	8	15.8000	15.8000	93-49(DR)
310021118000 Noble Seneca 24 8 8	N-84-S	310021298000	Noble	Seneca	15	00	8	79.3000	79.3000	93-49(DR)
	N-152-S	310021118000	Noble	Seneca	24	00	8	7.0000	7.0000	92-591(DR)

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

	N-151-S N-96.5-S N-109-S	310021119000 310021120000	Noble Noble	Seneca Seneca Wayne	Lot (#) 24 24 2	1 8 8 3	1 8 8 (	12.5000 97.0000 32.4000	Leasehold Acres 12.5000 97.0000 32.4000	93-63(DR) 92-538(DR) 92-502(DR)
	N-109-S	None	Noble	Wayne	2	1	1	32.4000	32.4000	89-502(DR)
	N-80-S	360021121000	Noble	Wayne	2	<b>∞</b>	8	0,3300	0,3300	92-417(DR)
	N-105-S	360021221000	Noble	Wayne	2	8	8	8.0000	8.0000	92-419(DR)
-	N-107.5-S	360021163000	Nable	Wayne	2	80	8	70,0000	70.0000	131-571(DR)
-	N-108-S	360021137000	Noble	Wayne	2	8	8	74.6400	74.6400	94-96(DR)
	N-107.25-S	360021164000	Noble	Wayne	2	60	8	75.0000	75.0000	131-571(DR)
-	N-116.5-S	360021137000	Noble	Wayne	3	8	8	0.5000	0.5000	92-417(DR)
	N-62-S	360021129000	Noble	Wayne	3	8	8	1.5000	1.5000	89-194(DR)
	}		!	•		)	1			89-397(DR)
	N-63-5	360021129000	Noble	Wayne	3	, s	. 8	46,3000	19.2041	89-396(DR)
	14-82-5	000671120006	IAODIC	wayile	Ü	٥	٥	30,000	50.000	89-393(DR)
	N-63-S	360021129000	Noble	Wayne	ω	œ	œ	75.5000	74.5487	89-396(DR)
	N-108.5-S	360021127000	Noble	Wayne	3	8	8	76.0000	76.0000	131-571(DR)
	N-66-S	360021130000	Noble	Wayne	3	8	8	149.4600	150.4600	7968(CPJ)
	N-79-S	360021120000	Nobie	Wayne	3	œ	8	153.0000	153.0000	94-96(DR)
	N-44-S	370021274000	Noble	Wayne	4	œ	8	4.1000	4.1000	7862(CPJ)
	N-47-S	370021278000	Noble	Wayne	4	œ	06	25.0000	25.0000	89-393(DR)
	N-45-S	370021276000	Noble	Wayne	4	00	00	30.0000	30.0000	89-399(DR)
	N-3-S	370021275000	Noble	Wayne	4	∞	.80	30.9100	30.9100	89-444(DR)
	N-44-S	370021277000	Noble	Wayne	4	œ	8	59.6000	59,6000	7862(CPJ)
	N-48-S	370021273000	Noble	Wayne	4	80	00	116.0000	116.0000	89-194(DR)
	N-46-S	370021276000	Noble	Wayne	4	œ	8	149.9000	149.9000	89-394(DR)
										90-141(DR)
	5	37000			•	•	)			2-884(OR)
	2 7 10	370021 29E000	Nichio	Want	7 4	0		1 0200	10(1.001	224 542(28)
_	C-4-N	3/00/1/85000	Nobie	wayne		α	cx	1.0300	1.0300	334-513(DK)

**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

171.0000	171.0000	cc cc c	∞ ∞ 0	11 12	Wayne Wayne	Noble Noble	360021240000 360021240000	N-102-S N-124-S
153.0000	153.0000	oo oo	<b>∞ ∞</b>	11 11	Wayne	Noble	360021175000 360021220000	N-101-S
134.5294	150,0000	œ	∞	11	Wayne	Noble	360021166000	N-104-S
	0000.8	80	8	11	Wayne	Noble	360021173000	N-104-S
5.0000	5.0000	8	8	11	Wayne	Noble	360021173000	N-104-S
1.0900	1.0900	8	8	11	Wayne	Noble	360021167000	N-104-S
160.0000	160.0000	8	8	10	Wayne	Noble	370011286000	N-61-S
141.2000	141.2000	8	8	10	Wayne	Noble	360021184000	N-61-S
59.9000	59.9000	8	8	10	Wayne	Noble	360021177000	N-81-S
44.4000	44.4000	8	8	10	Wayne	Noble	360021186000	N-83-S
40,0000	40.0000	8	8	10	Wayne	Noble	370011286000	N-54-S
39.0000	39.0000	8	8	10	Wayne	Noble	360021185000	N-81-S
30.5000	30.5000	8	8	10	Wayne	Noble	360021185000	N-82-S
1.4300	1.4300	8	8	10	Wayne	Noble	360021184000	N-81-S
159.0000	159.0000	88	8	9	Wayne	Noble	370021269000	N-50-S
7.5100	7.5100	8	8	9	Wayne	Noble	370021272000	N-53-S
2,0000	2.0000	8	8	9	Wayne	Noble	370021268000	N-51-S
0.9440	0.9440	8	8	9	Wayne	Noble	370018011000	N-296-S
0.8000	0.8000	8	8	9	Wayne	Noble	370021270000	N-49-S
4.3700	4.3700	8	8	8	Wayne	Noble	370021281000	N-42.5-S
154.7600	154.7600	8	8	5	Wayne	Noble	370021282000	N-42-S
61.1380	110.1000	8	8	5	Wayne	Noble	370021287000	N-2-S
35.2000	35.2000	8	8	5	Wayne	Noble	370021285000	N-1-S
21.0000	21.0000	8	8	5	Wayne	Noble	370029071000	N-7-S
	5.0000	8	8	5	Wayne	Noble	None	N-42-S
4.3000	4.3000	8	œ	5	Wayne	Noble	370021291000	N-42-S
Leasehold Acres	lidit Gluss Acres	(#)	(#)	Lot (#)	dingiani	County	rai cei ivallibei	istas Co Stell
MWCD Net	Track Cince Arrae	Range	TWP	Section or Military	Tourship	Calleto	Parcel Number	MWCD Acri ID

**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

	_	_	_	_	_		_	_	_		_	_	_	_	_	_	_			
MWCD Acq ID	N-123-S	N-125-S	N-120-S	N-122-S	N-120-S	N-125-S	N-121-S	N-116-S	N-114-S	N-115-S	N-109-S	N-153-S	N-128-S	N-154-S	N-129-S	N-130-S	N-132-S	N-133-S	N-136-S	N-137-S
Parcel Number	360021236000	360051079000	360021235000	360021231000	360021235000	360021232000	360021230000	360021114000	360021113000	360021114000	360021114000	360021003000	360021006000	360021004000	360021004000	360021004000	360021010000	360021009000	360021018000	360021019000
County	Noble																			
Township	Wayne																			
Section or Military Lot (#)	12	12	12	12	12	12	12	22	22	22	22	31	31	31	31	31	32	32	33	ដ
TWP (#)	8	8	8	8	8	8	8	1	1	1	Ъ	8	8	œ	00	œ	8	8	8	00
Range (#)	8	8	8	8	8	8	8	1	1	1	1	7	7	7	7	7	7	7	7	7
Tract Gross Acres	39.0000	40.0000	40.0000	44.6000	79.6000	133.1000	164.0000	4.0000	6.9000	52.0000	81.0000	1.0000	20.5000	64.7000	65.0000	78.1000	9.1000	65.1000	49.5000	79.0000
MWCD Net Leasehold Acres	39.0000	40.0000	40.0000	44.6000	79.6000	133.1000	164.0000	4.0000	6.9000	52.0000	81.0000	1.0000	20.0500	64.7000	65.0000	78.1000	9.1000	65.1000	49.5000	79.0000
Source Deed		92-549(DR)	89-620(DR)	93-26(DR)	89-620(DR)	92-549(DR)	92-381(DR)	92-417(DR)	89-502(DR)	92-415(DR)	89-502(DR)	89-293(DR)	94-49(DR)	93-63(DR)	92-627(DR)	89-432(DR)	92-536(DR)	90-121(DR)	90-121(DR)	92-538(DR)

201300001653
Filed for Record in
GUERNSEY COUNTY, OHIO
COLLEEN WHEATLEY, RECORDER
02-22-2013 At 10:59 am.
LEASE 68.00
OR Book 500 Page 581 - 587
201300001653
TIM VONVILLE
PICK UP

# MEMORANDUM OF OIL AND GAS LEASE

This Memorandum of Oil and Gas Lease made this 21st day of February, 2013 by and between Muskingum Watershed Conservancy District, hereinafter collectively call "Lessor", and Antero Resources Appalachian Corporation, whose address is 1625 17th Street, Denver, CO 80202, hereinafter called "Lessee".

# WITNESSETH

For and in consideration of the sum of Ten Dollars (\$10.00) cash in hand paid, and other good and valuable consideration, Lessor did make and execute in favor of Lessee, an Oil and Gas Lease dated February 21<sup>st</sup>, 2013, and made effective: February 21<sup>st</sup>, 2013.

# **LEGAL DESCRIPTION**

# See Exhibit B, attached hereto and made a part hereof

Containing 6,553.3391 acres, more or less, located in the Township of Richland, County of Guernsey, and Townships Beaver, Seneca, Marion and Wayne, County of Noble, State of Ohio, for the purpose of drilling, operating for, producing and removing oil and gas. The Lease has an initial term of five (5) years plus one (1) five (5) year option to extend the primary term.

This Memorandum of Oil and Gas Lease is being made and filed for the purpose of giving third parties notice of the existence of the lease described above. The execution, delivery and recordation of this Memorandum of Oil and Gas Lease shall have no effect upon, and is not intended as an amendment of the terms and conditions of the Lease.

THE REMAINDER OF THIS PAGE WAS INTENTIONALLY LEFT BLANK

In witness whereof this Memorandum of Oil and Gas Lease is executed as of the date first above written. WITNESS: LESSOR: Muskingum Watershed Conservancy District John Hoopingarner, Executive Director/Secretary WITNESS: LESSEE: Antero Resources Appalachian Corporation Name: Title: **ACKNOWLEDGEMENT** STATE OF Ohio COUNTY OF JUSCAYAULAS ) On this, the <u>215+</u> day of <u>Fibruary</u>, 2013, before me, the undersigned officer, personally appeared John Hoopingarner known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged/that they executed the same for the purposes therein contained. IN WITNESS WHEREOF, I hereunto set my hand and official seal. My Commission Expires: April 27 Signature/Notary Public: Wileca Name/ Notary Public (print): Kebecca STATE OF UNID COUNTY OF TUSCArawas On this, the <u>JIS</u> day of <u>Februari</u> \_\_\_ 2013, before me, the undersigned officer, personally appeared \_\_\_\_\_\_, known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that they executed the same for the purposes therein contained. IN WITNESS WHEREOF, I hereunto set my hand and official seal. My Commission Expires:

Prepared By: Antero Resources Appalachian Corporation 1625 17<sup>th</sup> Street Denver, CO 80202

Return To: Turner Oil and Gas Properties, Inc. 44510 Marietta Road Caldwell, OH 43724

Signature/Notary Public:

Name/ Notary Public (print): Rebocce

**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

11.4500	11.4500	7	00	26	Beaver	Noble	010021313000	N-142-S
15,0000	15.0000	1	1	ML 6	Richland	Guernsey	310002730000	G-71-S
38.2000	38.2000	1	1	ML 34	Richland	Guernsey	310002723000	G-14-S
43.1000	43.1000	1	_	ML 32	Richland	Guernsey	320000213000	G-8-S
28,1000	28.1000	1	1	ML 32	Richland	Guernsey	320000213000	G-11-S
21.2000	21.2000	1	1	ML 32	Richland	Guernsey	320000213000	G-16-S
5.0000	5.0000	1	ь	ML 31	Richland	Guernsey	310002723000	G-18-S
27.5710	51.0000	1	1	ML3	Richland	Guernsey	None	G-68.5-S
15.5632	48.5000	1	1	ML3	Richland	Guernsey	None	G-68-S
1,9995	2.0000	1	1	ML3	Richland	Guernsey	None	G-67.5-S
8.4700	8.4700	1	↦	ML 29	Richland	Guernsey	310002703000	G-21-S
99.4500	99.4500	1	1	ML 20	Richland	Guernsey	310002731000	G-24-S
3.5736	88.2000	1	1	ML 2	Richland	Guernsey	None	G-67-S
90.6000	90.6000	1	1	ML 19	Richland	Guernsey	310002706000	G-25-S
5,5640	12.5000	1	1	ML 19	Richland	Guernsey	310002706000	G-26-S
77.2833	101.5000	1	1	ML 18	Richland	Guernsey	310002733000	G-27-S
106,2000	106.2000	1	1	ML 17	Richland	Guernsey	310002710000	G-28-S
102.1000	102.1000	1	1	ML 16	Richland	Guernsey	310000359000	G-29-S
56.8596	79.4000	1	1	ML 15	Richland	Guernsey	310002719000	G-31-S
20.0000	20.0000	1	1	ML 15	Richland	Guernsey	310002719000	G-30-S
46.2431	95.1000	1	1	ML 14	Richland	Guernsey	310002713000	G-32-S
6,5495	7.1000	1	1	ML 14	Richland	Guernsey	310002713000	G-32.5-S
63,0000	63.0000	1	1	ML 13	Richland	Guernsey	310002735000	G-34-S
25.0000	25.0000	1	1	ML 13	Richland	Guernsey	310002735000	G-35-S
57.7000	57.7000	1	1	ML 12	Richland	Guernsey	310002733000	G-38-S
20.6000	20.6000	1	1	ML 12	Richland	Guernsey	310002733000	G-36-S
11.4000	11.4000	1	1	ML 11 & 12	Richland	Guernsey	310002733000	G-37-S
7.5000	7.5000	1	1	ML 11 & 12	Richland	Guernsey	310002733000	G-37-S
62.3000	62.3000	1	1	ML 11	Richland	Guernsey	310002732000	G-39-S
Leasehold Acres	Hact GIUSS Acres	(#)	(#)	Lot (#)	dinentario	County	T al cal lealinger	in the Co and in
MWCD Net	Tana Canas Aspec	Range	TWP	Section or Military	Township	College	Darcel Number	MWCD Act ID

**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

					<b>!</b>			
MWCD Acq ID	Parcel Number	County	Township	Section or Military	(#)	Range (#)	Tract Gross Acres	MWCD Net
N-143-S	010050042000	Noble	Beaver	26	00	7	11.8600	11.8600
N-142-S	None	Noble	Веачег	26	8	7	31.3000	31.3000
N-131-S	010050039000	Noble	Beaver	31	8	7	10.4000	10.4000
N-155-S	010050040000	Noble	Beaver	31	8	7	21,4600	21.4600
N-134-S	010021311000	Noble	Beaver	32	8	7	14.9000	14.9000
N-135-S	010050038000	Noble	Beaver	32	8	7	60.7000	60.7000
N-139-S	010050041000	Noble	Beaver	33	8	7	23.6000	23,6000
N-165-S	230021104000	Noble	Marion	30	7	7	6.3000	6.3000
N-158-S	230021101000	Noble	Marion	36	7	7	3.5000	3.5000
N-156-S	230021099000	Noble	Marion	36	7	7	11.2000	11.2000
N-159-S	230021100000	Noble	Marion	36	7	7	38.6600	38.6600
N-161-S	230021092000	Noble	Marion	36	7	7	40.0000	40.0000
N-98-S	310021202000	Noble	Seneca	13	8	8	88.9000	88.9000
N-99-S	310051061000	Noble	Seneca	13	8	8	99.7500	99.7500
N-100-S	310051062000	Noble	Seneca	13	8	8	103.8000	103.8000
N-96-S	310021204000	Noble	Seneca	13	8	8	119.2400	119.2400
N-97-S	310021205000	Noble	Seneca	13	8	8	120.0000	120.0000
N-91-S	310021198000	Noble	Seneca	14	œ	80	1.3100	1.3100
N-91-S	310021198000	Noble	Seneca	14	8	8	16.8600	16.8600
N-89-S	310021226000	Noble	Seneca	14	8	8	31.1000	31,1000
N-85-S	310021224000	Noble	Seneca	14	8	8	40.0000	40.0000
N-88-S	310021199000	Noble	Seneca	14	8	8	50.0000	25.3000
N-90-S	310021227000	Noble	Seneca	14	8	8	50.9000	50.9000
N-87-S	310021223000	Noble	Seneca	14	8	8	78.0000	78.0000
N-86-S	310021222000	Noble	Seneca	14	8	8	78.9000	78.9000
N-87-S	310021295000	Noble	Seneca	15	00	00	2.0000	2.0000
N-84-S	310021296000	Noble	Seneca	15	8	00	15.8000	15.8000
N-84-S	310021298000	Noble	Seneca	15	82	8	79.3000	79.3000
N-152-S	310021118000	Noble	Seneca	24	œ	8	7.0000	7.0000



Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

**EXHIBIT B** 

		3		:	Section or Military	JWP	Range		MWCD Not	College
	march wed in	raitei mulliper	County	diusumo	Lot (#)	(#)	(#)	Tract Gross Acres	Leasehold Acres	Deed
	N-151-S	310021119000	Nobie	Seneca	24	8	80	12.5000	12.5000	93-63(DR)
	N-96,5-S	310021120000	Noble	Seneca	24	8	CO	97.0000	97.0000	92-538(DR)
	N-109-S	None	Noble	Wayne	2	1	1	32,4000	32.4000	89-502(DR)
	N-80-S	360021121000	Noble	Wayne	2	8	œ	0.3300	0.3300	92-417(DR)
	N-105-S	360021221000	Noble	Wayne	2	00	œ	8.0000	8.0000	92-419(DR)
	N-107.5-S	360021163000	Noble	Wayne	2	00	00	70.0000	70.0000	131-571(DR)
	N-108-S	360021137000	Noble	Wayne	2	8	00	74.6400	74.6400	94-96(DR)
	N-107.25-S	360021164000	Noble	Wayne	2	<b>∞</b>	8	75.0000	75,0000	131-571(DR)
	N-116.5-S	360021137000	Noble	Wayne	3	œ	œ	0.5000	0.5000	92-417(DR)
	N-62-5	360021129000	Noble	Wayne	3	66	8	1,5000	1.5000	89-194(DR)
	N-63-S	360021129000	Nobie	Wayne	w	œ 	<b>x</b> 0	46 3000	10 2041	89-397(DR)
	N-65-S	360021129000	Noble	Wayne	ß	8	8	50.0000	50.0000	89-393(DR)
	N-63-6	360021129000	202		, 	,	,			89-397(DR)
	N-108.5-S	360021127000	Noble	Wayne	3	00 0	20 0	75,000	76,000	131_K71(DB)
	N-66-S	360021130000	Nobie	Wayne	3	8	∞	149.4600	150,4600	7968(CPJ)
_	N-79-S	360021120000	Noble	Wayne	3	8	00	153,0000	153,0000	94-96(DR)
	N-44-S	370021274000	Noble	Wayne	4	œ	8	4.1000	4.1000	7862(CPJ)
<del>-,</del>	N-4/-5	370021278000	Noble	Wayne	4	œ	00	25.0000	25.0000	89-393(DR)
_	N-2-V	370021275000	Nobře	Wayne	4	8	8	30.0000	30,0000	89-399(DR)
_	N-44-5	370021277000	Nobie	Wayne	4	00	00	30,9100	30,9100	89-444(DR)
	N-48-S	370021273000	Nobie	Wayne	•	0	٥	3.6000	59.6000	/862(CPJ)
Т	N-46-S	370021276000	Noble	Wayne	4	∞ (	œ c	149,9000	149,9000	89-394(DR)
										90-141(DR)
	N-43-S	370021274000	Noble	Wayne	<b>A</b>	×	ю	105 5000	1001	2-884(OR)
<b>—</b> —	N-4-S	370021285000	Noble	Wayne	5	00	œ	1.0300	1.0300	334-513(DR)

**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

92-421(DR)	16.0000	16.0000	8	8	12	Wayne	Noble	360021235000	N-127-S
92-536(DR)	15.1000	15.1000	8	8	12	Wayne	Noble	360021240000	N-124-S
95-501(DR)	171.0000	171.0000	00	œ	11	Wayne	Noble	360021174000	N-102-S
92-538(DR)	160.0000	160.0000	8	8	11	Wayne	Noble	360021220000	N-103-S
92-144(DR)	153.0000	153.0000	8	8	11	Wayne	Noble	360021175000	N-101-S
131-571(DR)	134.5294	150.0000	80	8	11	Wayne	Noble	360021166000	N-104-S
92-418(DR)	8.0000	8.0000	00	00	11	Wayne	Noble	360021173000	N-104-S
92-418(DR)	5.0000	5.0000	8	8	11	Wayne	Noble	360021173000	N-104-S
20-738(OR)	1.0900	1.0900	œ	00	11	Wayne	Noble	360021167000	N-104-S
92-384(DR)	160.0000	160.0000	œ	00	10	Wayne	Noble	370011286000	N-61-S
92-384(DR)	141.2000	141.2000	8	œ	10	Wayne	Noble	360021184000	N-61-S
131-571(DR)	59.9000	59.9000	œ	8	10	Wayne	Noble	360021177000	N-81-S
93-49(DR)	44.4000	44.4000	00	8	10	Wayne	Noble	360021186000	N-83-S
92-377(DR)	40.0000	40.0000	00	00	10	Wayne	Noble	370011286000	N-54-S
7968(CPJ)	39.0000	39.0000	8	8	10	Wayne	Noble	360021185000	N-81-S
92-546(DR)	30.5000	30.5000	8	8	10	Wayne	Noble	360021185000	N-82-S
7968(CPJ)	1.4300	1.4300	8	8	10	Wayne	Noble	360021184000	N-81-S
92-17(DR)	159.0000	159.0000	8	8	9	Wayne	Noble	370021269000	N-50-S
92-378(DR)	7.5100	7.5100	8	8	9	Wayne	Noble	370021272000	N-53-S
153-788(DR)	2.0000	2.0000	8	8	9	Wayne	Noble	370021268000	N-51-S
154-532(DR)	0.9440	0.9440	8	8	9	Wayne	Noble	370018011000	N-296-S
89-194(DR)	0.8000	0.8000	8	8	9	Wayne	Noble	370021270000	N-49-S
93-612(DR)	4.3700	4.3700	8	8	8	Wayne	Noble	370021281000	N-42.5-S
94-150(DR)	154.7600	154.7600	8	8	5	Wayne	Noble	370021282000	N-42-S
89-444(DR)	61.1380	110.1000	8	8	5	Wayne	Noble	370021287000	N-2-S
334-513(DR)	35.2000	35.2000	8	8	5	Wayne	Noble	370021285000	N-1-S
149-586(DR)	21.0000	21.0000	8	8	5	Wayne	Noble	370029071000	N-7-S
94-150(DR)	5.0000	5.0000	80	8	5	Wayne	Noble	None	N-42-S
78		4.3000	80	8	5	Wayne	Noble	370021291000	N-42-S
Deed	Leasehold Acres	I ract Gross Acres	(#)	(#)	Lot (#)	lownship	county	rarcei Number	MWCD Acq ID
Source	MWCD Net	Tunat Cunan Anna	Range	TWP	Section or Military	Tananahia	Canada	Danal Minaka	**************************************

**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

_	Γ				Γ-				Π							Γ				_
N-137-S	N-136-S	N-133-S	N-132-S	N-130-S	N-129-S	N-154-S	N-128-S	N-153-S	N-109-S	N-115-S	N-114-S	N-116-S	N-121-S	N-125-S	N-120-S	N-122-S	N-120-S	N-125-S	N-123-S	MWCD Acq ID
360021019000	360021018000	360021009000	360021010000	360021004000	360021004000	360021004000	360021006000	360021003000	360021114000	360021114000	360021113000	360021114000	360021230000	360021232000	360021235000	360021231000	360021235000	360051079000	360021236000	Parcel Number
Noble	Nobie	Noble	County																	
Wayne	Township																			
33	33	32	32	31	31	31	31	31	22	22	22	22	12	12	12	12	12	12	12	Section or Military  Lot (#)
8	8	8	8	8	. 8	8	8	8	1	1	1	1	8	8	8	8	8	8	8	TWP (#)
7	7	7	7	7	7	7	7	7	1	1	1	_ 1	8	8	8	80	8	00	00	Range (#)
79.0000	49.5000	65.1000	9.1000	78.1000	65.0000	64.7000	20.5000	1.0000	81.0000	52.0000	6.9000	4.0000	164.0000	133.1000	79.6000	44.6000	40.0000	40.0000	39.0000	Tract Gross Acres
79.0000	49.5000	65.1000	9.1000	78.1000	65,000	64.7000	20.0500	1.0000	81.0000	52.0000	6.9000	4.0000	164.0000	133,1000	79.600	44.6000	40.0000	40.0000	39.0000	MWCD Net Leasehold Acres
92-538(DR)	90-121(DR)	90-121(DR)	92-536(DR)	89-432(DR)	92-627(DR)	93-63(DR)	94-49(DR)	89-293(DR)	(RD)205-68	92-415(DR)	89-502(DR)	92-417(DR)	92-381(DR)	92-549(DR)	(RD)029-68	93-26(DR)	(RD)029-68	92-549(DR)	(RD)021-68	Source Deed

## PAID-UP OIL & GAS LEASE

Lease No.

This Lease, including Exhibit "A" which is attached and fully incorporated herein, made this 21st day of February, 2013, by and between: Muskingum Watershed Conservancy District, whose address is 1319 3rd Street NW, P.O. Box 349, New Philadelphia, OH 44663, hereinafter called "Lessor", and Antero Resources Appalachian Corporation, a Delaware corporation, whose address is 1625 17th Street, Denver, CO 80202, hereinafter called "Lessee".

WITNESSETH, that for and in consideration of Ten Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and of the mutual covenants and agreements hereinafter set forth, the Lessor and Lessee agree as follows:

LEASING CLAUSE. Lessor hereby leases exclusively to Lessee all the oil and gas (including, but not limited to coal seam gas, coalbed methane gas, coalbed gas, methane gas, gob gas, occluded methane/natural gas and all associated natural gas and other hydrocarbons and non-hydrocarbons contained in, associated with, emitting from, or produced/originating within any formation, gob area, mined-out area, coal seam, and all communicating zones), and their liquid or gaseous constituents, whether hydrocarbon or non-hydrocarbon, underlying the land herein leased, together with such exclusive rights as may be necessary or convenient for Lessee, at its election, to explore for, develop, produce, measure, and market production from the Leasehold, and from adjoining lands, using methods and techniques which are not restricted to current technology, including the right to conduct geophysical and other exploratory tests; to drill, maintain, operate, cease to operate, plug, abandon, and remove wells; to use or install roads, electric power and telephone facilities, and to construct pipelines with appurtenant facilities, including data acquisition, compression and collection facilities for use in the production and transportation of products from the Leasehold or from neighboring lands across the Leasehold, to use oil, gas, and non-domestic water sources, free of cost, to store gas of any kind underground, regardless of the source thereof, including the injecting of gas therein and removing the same therefrom; to protect stored gas; to operate, maintain, repair, and remove material and equipment; to use and occupy the subsurface for a wellbore or wellbores to drill across, through and under the Leasehold.

<u>DESCRIPTION</u>. The Leasehold is located in the Township of Richland, County of Guernsey, and the Townships of Beaver, Marion, Seneca and Wayne, County of Noble, in the State of OHIO, described in Exhibit B and containing a total of 6,553.3391 Leasehold acres, whether actually more or less, and including contiguous lands owned by Lessor.

LEASE TERM. This Lease shall remain in force for a "Primary Term" of five (5) years from 12:00 A.M. February 21st, 2013 (effective date) to 11:59 P.M. February 20th, 2018 (last day of Primary Term) and shall continue beyond the Primary Term as to the entirety of the Leasehold if any of the following is satisfied: (i) operations are conducted on the Leasehold or lands pooled/unitized therewith in search of oil, gas, or their constituents, or (ii) a well deemed by Lessee to be capable of production is located on the Leasehold or lands pooled/unitized therewith, or (iii) oil or gas, or their constituents, are produced from the Leasehold or lands pooled/unitized therewith, or (iv) if the Leasehold or lands pooled/unitized therewith is used for the underground storage of gas, or for the protection of stored gas, or (v) if prescribed payments are made, or (vi) if Lessee's operations are delayed, postponed or interrupted as a result of any coal, stone or other mining or mining related operation under any existing and effective lease, permit or authorization covering such operations on the leased premises or on other lands affecting the leased premises, such delay will automatically extend the primary or secondary term of this oil and gas lease without additional compensation or performance by Lessee for a period of time equal to any such delay, postponement or interruption.

If there is any dispute concerning the extension of this Lease beyond the Primary Term by reason of any of the alternative mechanisms specified herein, the payment to the Lessor of the prescribed payments provided below shall be conclusive evidence that the Lease has been extended beyond the Primary Term.

Notwithstanding anything to the contrary in this Lease, including the Addendum attached hereto as Exhibit A, Lessee is hereby given the option to extend by renewal the Primary Term of this Lease for one additional five (5) year period. This option may be exercised by Lessee, in its sole discretion, at any time up to thirty (30) calendar days before the expiration of the original Primary Term by notifying Lessor in writing of Lessee's intent to exercise its option and tendering to Lessor the Extension Payment (as defined below) prior to the expiration of the Primary Term. The Extension Payment shall be an amount equal to the price per acre used to calculate the original signing bonus paid by Lessee to Lessor, multiplied by the number of net mineral acres that are covered by this Lease that at such time are not being maintained by other provisions hereof. Should this option be exercised, it shall be considered for all purposes, including without limitation, with respect to all provisions contained in the Addendum attached hereto as Exhibit A, as though this Lease originally provided for a Primary Term of ten (10) years.

# NO AUTOMATIC TERMINATION OR FORFEITURE

(A) CONSTRUCTION OF LEASE: The language of this Lease (including, but not limited to, the Lease Term and Extension of Term clauses) shall never be read as language of special limitation. This Lease shall be construed against termination, forfeiture, cancellation or expiration and in favor of giving effect to the continuation of this Lease where the circumstances exist to maintain this Lease in effect under any of the alternative mechanisms set forth above. In connection therewith, (i) a well shall be deemed to be capable of production if it has the capacity to produce a profit over operating costs, without regard to any capital costs to drill or equip the well, or to deliver the oil or gas to market, and (ii) the Lessee shall be deemed to be conducting operations in search of oil or gas, or their constituents, if the Lessee is engaged in geophysical and other exploratory work including, but not limited to, activities to drill an initial well, to drill a new well, or to rework, stimulate, deepen, sidetrack, frac, plug back in the same or different formation or repair a well or equipment on the Leasehold or any lands pooled/unitized therewith (such activities shall include, but not be limited to, performing any preliminary or preparatory work

necessary for drilling, conducting internal technical analysis to initiate and/or further develop a well, obtaining permits and approvals associated therewith and may include reasonable gaps in activities provided that there is a continuum of activities showing a good faith effort to develop a well or that the cessation or interruption of activities was beyond the control of Lessee, including interruptions caused by the acts of third parties over whom Lessee has no control or regulatory delays associated with any approval process required for conducting such activities).

(B) LIMITATION OF FORFEITURE: This Lease shall never be subject to a civil action or proceeding to enforce a claim of termination, cancellation, expiration or forfeiture due to any action or inaction by the Lessee, including, but not limited to making any prescribed payments authorized under the terms of this Lease, unless the Lessee has received written notice of Lessor's demand and thereafter fails or refuses to satisfy or provide justification responding to Lessor's demand within 60 days from the receipt of such notice. If Lessee timely responds to Lessor's demand, but in good faith disagrees with Lessor's position and sets forth the reasons therefore, such a response shall be deemed to satisfy this provision, this Lease shall continue in full force and effect and no further damages (or other claims for relief) will accrue in Lessor's favor during the pendency of the dispute, other than claims for payments that may be due under the terms of this Lease.

<u>PAYMENTS TO LESSOR.</u> In addition to the bonus paid by Lessee for the execution hereof, Lessee covenants to pay Lessor, proportionate to Lessor's percentage of ownership, as follows:

- (A) DELAY RENTAL: To pay Lessor as Delay Rental, after the first year, at the rate of <u>five dollars</u> (\$5.00) per net acre per year payable in advance. The parties hereto agree that this is a Paid-Up Lease with no further Delay Rental and/or Delay in Marketing payments due to Lessor during the Primary Term hereof.
- (B) ROYALTY: To pay Lessor as Royalty less all taxes, assessments, and adjustments on production from the Leasehold, as follows:
- 1. OIL: To deliver to the credit of Lessor a Royalty equal to twenty percent (20%) of the gross revenue realized by Lessee for all oil and any constituents thereof produced and marketed from the Leasehold, less the cost to transport, handle, separate, meter, treat, process and market the oil.
- 2. GAS: To pay Lessor an amount equal to twenty percent (20%) of the gross revenue realized by Lessee for all gas and the constituents thereof produced and marketed from the Leasehold, less the cost to transport, gather, dehydrate, compress, market, meter, treat and process the gas and any losses in volumes to point of measurement that determines the revenue realized by Lessee. Lessee may withhold Royalty payment until such time as the total withheld exceeds fifty dollars (\$50.00).
- (C) DELAY IN MARKETING: In the event that Lessee drills a well on the Leasehold or lands pooled/unitized therewith that is awaiting completion (such as hydraulic fracture stimulation), or that Lessee deems to be capable of production, but does not market producible gas, oil, or their constituents therefrom and there is no other basis for extending this Lease, Lessee shall pay after the Primary Term, and any extension thereof, and until such time as marketing is established (or Lessee surrenders the Lease) a Delay in Marketing payment equal in amount and frequency to the annual Delay Rental payment, and this Lease shall remain in full force and effect to the same extent as payment of Royalty.
- (D) SHUT-IN: In the event that production of oil, gas, or their constituents is interrupted and not marketed for a period of twelve (12) months, and there is no producing well on the Leasehold or lands pooled/unitized therewith, Lessee shall thereafter, as Royalty for constructive production, pay a Shut-in Royalty equal in amount and frequency to the annual Delay Rental payment until such time as production is re-established (or lessee surrenders the Lease) and this Lease shall remain in full force and effect. During Shut-in, Lessee shall have the right to rework, stimulate, or deepen any well on the Leasehold or to drill a new well on the Leasehold in an effort to re-establish production, whether from an original producing formation or from a different formation. In the event that the production from the only producing well on the Leasehold is interrupted for a period of less than twelve (12) months, this Lease shall remain in full force and effect without payment of Royalty or Shut-in Royalty.
- (E) DAMAGES: Lessee will remove unnecessary equipment and materials and reclaim all disturbed lands at the completion of activities, and Lessee agrees to repair any damaged improvements to the land and pay for the loss of growing crops or marketable timber.
- (F) MANNER OF PAYMENT: Lessee shall make or tender all payments due hereunder by check, payable to Lessor, at Lessor's last known address, and Lessee may withhold any payment pending notification by Lessor of a change in address. Payment may be tendered by mail or any comparable method (e.g. Federal Express), and payment is deemed complete upon mailing or dispatch. Where the due date for any payment specified herein falls on a holiday, Saturday or Sunday, payment tendered (mailed or dispatched) on the next business day is timely.
- (G) CHANGE IN LAND OWNERSHIP: Lessee shall not be bound by any change in the ownership of the Leasehold until furnished with such documentation as Lessee may reasonably require. Pending the receipt of documentation, Lessee may elect either to continue to make or withhold payments as if such a change had not occurred.
- (H) TITLE: If Lessee receives evidence that Lessor does not have title to all or any part of the rights herein leased, Lessee may immediately withhold payments that would be otherwise due and payable hereunder to Lessor until the adverse claim is fully resolved.
- (I) LIENS: Lessee may at its option pay and discharge any past due taxes, mortgages, judgments, or other liens and encumbrances on or against any land or interest included in the Leasehold; and Lessee shall be entitled to recover from the debtor, with legal interest and costs, by deduction from any future payments to Lessor or by any other lawful means. In the event the leased lands are encumbered by a prior mortgage, then, notwithstanding

anything contained herein to the contrary, Lessee shall have the right to suspend the payment of any royalties due hereunder, without liability for interest, until such time as Lessor obtains at its own expense a subordination of the mortgage in a form acceptable to Lessee.

(J) CHARACTERIZATION OF PAYMENTS: Payments set forth herein are covenants, not special limitations, regardless of the manner in which these payments may be invoked. Any failure on the part of the Lessee to timely or otherwise properly tender payment can never result in an automatic termination, expiration, cancellation, or forfeiture of this Lease. Lessor recognizes and acknowledges that oil and gas lease payments, in the form of rental, bonus and royalty, can vary depending on multiple factors and that this Lease is the product of good faith negotiations. Lessor hereby agrees that the payment terms, as set forth herein, and any bonus payments paid to Lessor constitute full consideration for the Leasehold. Lessor further agrees that such payment terms and bonus payments are final and that Lessor will not seek to amend or modify the lease payments, or seek additional consideration based upon any differing terms which Lessee has or will negotiate with any other Lessor/oil and gas owner.

(K) PAYMENT REDUCTIONS: If Lessor owns a lesser interest in the oil or gas than the entire undivided fee simple estate, then the rentals (except for Delay Rental payments as set forth above), royalties and shut-in royalties hereunder shall be paid to Lessor only in the proportion which Lessor's interest bears to the whole and undivided fee.

UNITIZATION AND POOLING. Lessor grants Lessee the right to pool, unitize, or combine all or parts of the Leasehold with other lands, whether contiguous or not contiguous, leased or unleased, whether owned by Lessee or by others, at a time before or after drilling to create drilling or production units either by contract right or pursuant to governmental authorization. Pooling or unitizing in one or more instances shall not exhaust Lessee's pooling and unitizing rights hereunder, and Lessee is granted the right to change the size, shape, and conditions of operation or payment of any unit created. Lessor agrees to accept and receive out of the production or the revenue realized from the production of such unit, such proportional share of the Royalty from each unit well as the number of Leasehold acres included in the unit bears to the total number of acres in the unit. Otherwise, as to any part of the unit, drilling, operations in preparation for drilling, production, or shut-in production from the unit, or payment of Royalty, Shut-in Royalty, Delay in Marketing payment or Delay Rental attributable to any part of the unit (including non-Leasehold land) shall have the same effect upon the terms of this Lease as if a well were located on, or the subject activity attributable to, the Leasehold. In the event of conflict or inconsistency between the Leasehold acres ascribed to the Lease, and the local property tax assessment calculation of the lands covered by the Lease, or the deeded acreage amount, Lessee may, at its option, rely on the latter as being determinative for the purposes of this paragraph.

<u>FACILITIES</u>. Lessee shall not drill a well on the Leasehold within 200 feet of any structure located on the Leasehold without Lessor's written consent. Lessor shall not erect any building or structure, or plant any trees within 200 feet of a well or within 25 feet of a pipeline without Lessee's written consent. Lessor shall not improve, modify, degrade, or restrict roads and facilities built by Lessee without Lessee's written consent.

CONVERSION TO STORAGE. Lessee is hereby granted the right to convert the Leasehold or lands pooled/unitized therewith to gas storage. At the time of conversion, Lessee shall pay Lessor's proportionate part for the estimated recoverable gas remaining in any well drilled pursuant to this Lease using methods of calculating gas reserves as are generally accepted by the natural gas industry and, in the event that all wells on the Leasehold and/or lands pooled/unitized therewith have permanently ceased production, Lessor shall be paid a Conversion to Storage payment in an amount equal to Delay Rental for as long thereafter as the Leasehold or lands pooled/unitized therewith is/are used for gas storage or for protection of gas storage; such Conversion to Storage payment shall first become due upon the next ensuing Delay Rental anniversary date. The use of any part of the Leasehold or lands pooled or unitized therewith for the underground storage of gas, or for the protection of stored gas will extend this Lease beyond the Primary Term as to all rights granted by this Lease, including but not limited to production rights, regardless of whether the production and storage rights are owned together or separately.

DISPOSAL AND INJECTION WELLS. Lessor hereby grants to Lessee the right to drill wells and/or reenter existing wells, including necessary location, roadway and pipeline easements and rights of way, on any part of the Leasehold or lands pooled or unitized therewith for the disposal and/or injection into any subsurface strata, other than a potable water strata, of air, gas, brine, completion and production fluids, waste water and any hydrocarbon related substances from any source, including, but not limited to wells on the Leasehold or lands pooled or unitized therewith or from properties and lands outside the Leasehold or lands pooled or unitized therewith, and to conduct all operations as may be required, for so long as necessary and required by Lessee for purposes as herein provided. If, at the expiration of the Primary Term, and any extension thereof, Lessee is disposing and/or injecting into any subsurface strata underlying the Leasehold or lands pooled or unitized therewith or conducting operations for such disposal and/or injection and this lease is not being maintained by any other provision contained herein and no other payments are being made to Lessor as prescribed hereunder, Lessee shall pay to Lessor the sum of one thousand dollars (\$1,000.00) per year, proportionately reduced to Lessor's ownership in the Leasehold and surface as it bears to the full and undivided estate, beginning on the next anniversary date of this Lease and said payment and term of this Lease, insofar as to terms and provisions contained herein applicable to disposal and injection wells, shall continue annually thereafter for so long as necessary and required by Lessee for purposes as herein provided and until all disposal and/or injection wells located on the Leasehold or on lands pooled or unitized therewith are plugged and abandoned. Lessor agrees that if required by Lessee, regulatory agency or governmental authority having jurisdiction, Lessor shall enter a separate Disposal and Injection Agreement with Lessee for the purposes as herein provided.

<u>TITLE AND INTERESTS.</u> Lessor hereby warrants generally and agrees to defend title to the Leasehold and covenants that Lessee shall have quiet enjoyment hereunder and shall have benefit of the doctrine of after acquired title. Should any person having title to the Leasehold fail to execute this Lease, the Lease shall nevertheless be binding upon all persons who do execute it as Lessor.

<u>LEASE DEVELOPMENT</u>. There is no implied covenant to drill, prevent drainage, further develop or market production within the Primary Term or any extension of term of this Lease. There shall be no Leasehold forfeiture, termination, expiration or cancellation for failure to comply with said implied covenants. Provisions herein, including, but not limited to the prescribed payments, constitute full compensation for the privileges herein granted.

<u>COVENANTS</u>. This Lease and its expressed or implied covenants shall not be subject to termination, forfeiture of rights, or damages due to failure to comply with obligations if compliance is effectively prevented by federal, state, or local law, regulation, or decree, or the acts of God and/or third parties over whom Lessee has no control.

ARBITRATION. In the event of a disagreement between Lessor and Lessee concerning this Lease or the associated Order of Payment, performance thereunder, or damages caused by Lessee's operations, the resolution of all such disputes shall be determined by arbitration in accordance with the rules of the American Arbitration Association. Arbitration shall be the exclusive remedy and cover all disputes, including but not limited to, the formation, execution, validity and performance of the Lease and Order of Payment. All fees and costs associated with the arbitration shall be borne equally by Lessor and Lessee.

<u>ENTIRE CONTRACT</u>. The entire agreement between Lessor and Lessee is embodied herein and in the associated Order of Payment (if any). No oral warranties, representations, or promises have been made or relied upon by either party as an inducement to or modification of this Lease.

<u>TITLE CURATIVE.</u> Lessor agrees to execute affidavits, ratifications, amendments, permits and other instruments as may be necessary to carry out the purpose of this lease.

SURRENDER. Lessee, at any time, and from time to time, may surrender and cancel this Lease as to all or any part of the Leasehold by recording a Surrender of Lease and thereupon this Lease, and the rights and obligations of the parties hereunder, shall terminate as to the part so surrendered; provided, however, that upon each surrender as to any part of the Leasehold, Lessee shall have reasonable and convenient easements for then existing wells, pipelines, pole lines, roadways and other facilities on the lands surrendered.

<u>SUCCESSORS.</u> All rights, duties, and liabilities herein benefit and bind Lessor and Lessee and their heirs, successors, and assigns.

FORCE MAJEURE. All express or implied covenants of this Lease shall be subject to all applicable laws, rules, regulations and orders. When drilling, reworking, production or other operations hereunder, or Lessee's fulfillment of its obligations hereunder are prevented or delayed by such laws, rules, regulations or orders, or by inability to obtain necessary permits, equipment, services, material, water, electricity, fuel, access or easements, or by fire, flood, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike or labor disputes, or by inability to obtain a satisfactory market for production or failure of purchasers or carriers to take or transport such production, or by any other cause not reasonably within Lessee's control, this Lease shall not terminate, in whole or in part, because of such prevention or delay, and, at Lessee's option, the period of such prevention or delay shall be added to the term hereof. Lessee shall not be liable in damages for breach of any express or implied covenants of this Lease for failure to comply therewith, if compliance is prevented by, or failure is the result of any applicable laws, rules, regulations or orders or operation of force majeure.

SEVERABILITY. This Lease is intended to comply with all applicable laws, rules, regulations, ordinances and governmental orders. If any provision of this Lease is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall survive and continue in full force and effect to the maximum extent allowed by law. If a court of competent jurisdiction holds any provision of this Lease invalid, void, or unenforceable under applicable law, the court shall give the provision the greatest effect possible under the law and modify the provision so as to conform to applicable law if that can be done in a manner which does not frustrate the purpose of this Lease.

<u>COUNTERPARTS</u>. This Lease may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Lease and all of which, when taken together, will be deemed to constitute one and the same agreement.

IN WITNESS WHEREOF, Lessor hereunto sets hand and seal.

WITNESS:

LESSOR:

Muskingum Watershed Conservancy District
John Hoopingarner, Executive Director/Secretary

LESSOR:

Antero Resources Appalachian Corporation

Name: The

Title: Lane. 194mager

# ACKNOWLEDGEMENT

STATE OF OWN ) SS: COUNTY OF TUS Carawas)
COUNTY OF \(\sus_{avawas}\)
On this, the <u>land that the land of the land that the land the land that the land that the land that the land that the land the land that the land the land that the land that the land that the land that the land the land that the land that the land the land that the land the land that the land the lan</u>
In witness whereof, I hereunto set my hand and official seal
CORPORATE ACKNOWLEDGEMENT My commission expires  Apr. 27,2016
CORPORATE ACKNOWLEDGEMENT My commission expres
State of GOLORADO) Ohio County of DENVER) Tuscarawas
On the last day of the last day of the undersigned officer of ANTERO RESOURCES APPALACHIAN CORPORATION, a Delaware corporation, on behalf of the corporation.
In witness whereof, I hereunto set my hand and official seal
Notary Public  My Commission expires  April 27, 2016

# EXHIBIT "A"

This Exhibit "A" is attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013 (the "Lease") by and between Muskingum Watershed Conservancy District ("Lessor"), 1319 3rd St., NW, PO Box 349, New Philadelphia, Ohio, 44663, and Antero Resources Appalachian Corporation ("Lessee"), a Delaware corporation, whose address is 1625 17th Street, Denver, CO 80202. If any of the following provisions conflict with or are inconsistent with the printed provisions or terms of this Lease, the following provisions shall control.

The Lessor is a political subdivision and a body corporate of the State of Ohio, with all the powers of a corporation, duly engaged in carrying out the public purposes and services authorized under the Conservancy Laws of the State of Ohio, being Sections 6101.01 to 6101.99, inclusive, of the Ohio Revised Code. In accordance with its primary purposes and present and future services to the public, it is necessary for the Lessor to reserve herein various rights of prior or other approval of or permission for activities which the Lessee may be carrying on or proposing to carry on under the provisions of this Lease. The Lessee hereby recognizes the primary public purposes and activities of the Lessor involved and accepts this Lease with knowledge thereof and agrees that the right of the Lessor, its Board of Directors or its duly authorized officers or other representatives to grant permission or approval only upon specific condition or conditions, or to withhold permission or approval at the sole discretion of the Lessor, or the person or persons authorized to act for it.

The oil and gas or either thereof which may underlie the Leasehold, if present thereunder, constitute a valuable natural resource which can be made available for use to the maximum degree only if the extraction thereof is conducted contemporaneously with or prior to similar operations now under way or contemplated on other adjoining or nearby properties. The Board of Directors of Lessor has determined that the execution of this Lease is in keeping with sound principals of overall public resource management in that the long term public benefits will be greater than any damage to public land and other resources which could result.

This lease and the rights and privileges herein granted to Lessee are subject to:

- (A) Any flowage easements that may have been or that may hereafter be conveyed by the Lessor to the United States of America or otherwise acquired by the United States of America.
- (B) All existing farming and pasturing rights or other rights which Lessor may have granted and to which the Leasehold or any portion or portions thereof are subject.
- (C) Public or private roads, ways, uses, easements, exceptions, reservations, covenants and conditions, if any, of record or which may exist as long as the same remain in force and effect.
- (D) Such state of facts as an examination of said tracts and/or survey thereof would disclose.
- (E) All existing electrical power, telephone and telegraph lines, pipe lines, radio and micro-wave stations and the poles, towers, guys and anchors or other appurtenances thereto, buildings, recreational and other facilities with reasonable means of access thereto to service, maintain, enlarge, renew, repair, replace, extend, patrol and remove said facilities and to any future facilities and appurtenances which Lessor may deem necessary for public utility or other public use or service or require for its own use.

**DEPTH LIMITATION:** Notwithstanding anything to the contrary herein, this Lease is limited to those depths lying below the top of the Queenston Formation. Lessor expressly excepts from this Lease, reserves and retains all rights and depths from the surface of the earth to the top of the Queenston Formation, provided however, that Lessee shall have a subsurface easement to drill through those depths lying 500 feet above the top of the Queenston Formation, if such subsurface easement is necessary for Lessee to access the depths lying below the top of the Queenston Formation. It is specifically understood that such subsurface easement does not grant Lessee the right to complete, test, or produce oil, gas or other minerals from any depths above the top of the Queenston Formation. Specifically reserved by Lessor are all oil, gas and other mineral rights from the surface of the earth to the top of the Queenston Formation.

**ROYALTY PAYMENTS:** Notwithstanding anything to the contrary herein, all oil, gas and other proceeds accruing to Lessor under this Lease shall be without deduction for, directly or indirectly, any post-production costs, including but not limited to, the cost of producing, gathering, storing, separating, treating, dehydrating, compressing, processing, transporting, metering, and marketing the oil, gas and other products produced, saved and sold from the Leasehold.

METERING & MEASUREMENT: Lessee shall operate each well with a discrete well meter at the well site, which will measure all the gas produced from that well. Lessee shall ensure that all meters are maintained according to industry standards. The volume of gas produced, saved, used, or marketed shall be measured according to American Gas Association (AGA) standards Boyle's Law for the measurement of gas under varying pressures.

MARKET ENHANCEMENT: It is agreed between the Lessor and Lessee that, notwithstanding any language herein to the contrary, all oil, gas or other proceeds accruing to the Lessor under this Lease shall be paid without deduction for, directly or indirectly, any post-production costs, including but not limited to, the costs of producing, gathering, storing, separating, treating, dehydrating, compressing, processing, transporting, and marketing the oil, gas and other products produced hereunder to extent such costs are necessarily incurred to transform the product into a marketable form; provided, however, any such costs which result in enhancing the value of already marketable oil, gas or other products may be deducted from Lessor's share of production proceeds so long as such costs are reasonable and do not exceed the value of the enhancement obtained by incurring such costs.

NO OTHER MINERALS: This Lease shall cover only oil, gas, casinghead gas, casinghead gasoline and all other gases and their respective constituent vapors, liquid or gaseous hydrocarbons produced in association therewith that may be produced through the well bore. This Lease does not include and there is hereby excepted and reserved unto Lessor all of the sulfur, coal, lignite, uranium, and other fissionable material, geothermal energy, base and precious metals, rock, stone, gravel, and any other mineral substances (excepting those described above) presently owned by Lessor in, under, or upon the Leasehold, together with rights of ingress and egress and use of the Leasehold by Lessor or its lessees or assignees for purposes of exploration for and production and marketing of the materials and minerals reserved hereby.

**SECONDARY TERM:** With regard to the extension of this lease beyond the Primary Term, operations shall mean only (a) the production of oil, gas or other liquid hydrocarbons in paying quantities subsequent to drilling or (b) the actual drilling, completing, reworking, recompleting, deepening, plugging back or repairing of a well in search for or in an endeavor to obtain production of oil or gas, conducted in good faith and with due diligence.

<u>PRUDENT OPERATOR:</u> Lessee will conduct all operations as a prudent owner, and will attempt to secure a timely market for production from a well.

<u>NO STORAGE OR DISPOSAL RIGHTS</u>: Notwithstanding anything to the contrary herein, Lessee is not granted any right whatsoever to use the Leasehold, or any portion thereof, for gas storage purposes or the disposal of any salt water or other substance beneath the Leasehold for any purpose.

NO GAS COMPRESSION OR PROCESSING FACILITIES: There shall be no natural gas compressors or processing facilities located on the Leasehold.

OFFSETS: No well containing any portion of the Leasehold shall be shut in if drainage will occur through any well within the distances for oil and gas wells on lands not owned by the Lessor and, if such draining gas wells are on compression, the offset wells on the Leasehold shall be placed on compression, as long as safety and environmental integrity are maintained.

<u>PLUGGING</u>: Lessee shall properly and effectively plug all wells drilled by Lessee on any portion of the Leasehold or in a Unit formed that contains any portion of the Leasehold before abandoning, in accordance with the regulations of the State of Ohio.

Lessee shall have six (6) months after termination, abandonment, or surrender of the lease, or any part thereof, in which to plug and abandon all wells drilled by the Lessee.

For any well drilled under the terms of this lease which shall be plugged, Lessee shall provide a copy of the plugging report to the Ohio Department of Natural Resources ("ODNR") within thirty (30) days after plugging of a well and shall be completed as directed by ODNR.

OPERATIONS BY LESSEE: All operations and activities conducted by Lessee pursuant to this Lease shall be done with due diligence, in a good and workmanlike manner, using skilled, competent and experienced workers and supervisors and in accordance with good oilfield practices and industry standards. Lessee agrees to comply with all laws, rules, and regulations, which are now or may become applicable to the Lessee's operations and activities covered by this Lease or arising out of the performance of such operations and activities whether within or without the Leasehold, including, but not limited to, all applicable environmental laws, rules, and regulations. In the event that any provision of this Lease is inconsistent with or contrary to any applicable law, rule or regulation, said provision shall be deemed to be modified to the extent required to comply with said law, rule, or regulation and this Lease, as so modified, shall remain in full force and effect during the term hereof.

DISCHARGE OF LEASE: Upon termination of this Lease or any portion thereof, or upon expiration of this Lease, Lessee shall provide Lessor documentation in recordable form of such termination or expiration within thirty (30) calendar days after the date of termination or expiration. Should Lessee fail to provide such documentation, Lessee hereby grants to Lessor the right and authority, after thirty (30) days prior written notice delivered to Lessee by certified mail at the address shown on this lease, or such other address as has been subsequently provided by Lessee to Lessor, to file an affidavit on record reflecting such expiration or termination, which filing shall be binding upon Lessee

<u>PROHIBITION OF ACTIVITIES</u>: Lessee is prohibited from performing any activity on the surface of the Leasehold which is not expressly permitted pursuant to the terms and conditions of this Lease.

WATER DAMAGE AND TESTING: In the event any operations or activities carried on by Lessee damage, disturb, contaminate or injure fresh water well or source located on a Unit containing any portion of the Leasehold, Lessee shall at its sole expense use its best efforts to correct any such damage, disturbance, contamination or injury. Lessee shall have Lessor's current water supply sampled and tested prior to any drilling on the Leasehold, and Lessee shall offer to test both (i) prior to the drilling of each well and (ii) within sixty (60) days of the completion of each well or group of wells drilled within 120 days, all other water supplies within 2,500' feet of any well drilled on a Unit containing any portion of the Leasehold. Should Lessor or any owner of such water supplies experience a demonstrable material adverse change in the quality of their water supply that could be related to Lessee's activities and are compared to the baseline established under this paragraph, during or after the completion of Lessee's drilling and/or completion operations, Lessee shall, within forty-eight (48) hours of Lessor's or other such owner's written request, sample and test, their water supply at Lessee's expense. Should such test reflect a material adverse change as the result of Lessee's drilling and/or completion operations within Units containing any portion of the Leasehold, Lessee, at Lessee's expense, agrees to provide Lessor or said owners with water of quality comparable to the fresh water source damaged until such time as Lessor's or other such owner's water source has been repaired or replaced with a source of substantially similar quality. Any such repair or replacement of Lessor's or other such owner's water supply,

including any and all costs associated therewith, shall be the sole responsibility of Lessee. The statutory protections related to potable water quality and quantity as set forth in Ohio Law are hereby incorporated by reference.

<u>DAMAGE TO SURFACE WATER</u>: Lessee shall not use any water from Lessor's lakes, ponds, streams or springs. In the event any operations or activities carried on by Lessee damage, disturb, contaminate or injure any lakes, ponds, streams or springs on the Leasehold, Lessee shall correct any such damage, disturbance, contamination or injury and shall be solely responsible for any and all costs associated therewith.

INDEMNIFICATION: Lessee shall indemnify, protect, save harmless and defend Lessor from and against any loss, claim or expense, including without limitation claims for injury or death to persons, damage to property, water supply or natural resources occurring as a result of Lessee's operations and activities pursuant to this Lease and/or the use of the Leasehold, or as a result of loss, expense, injury, death or damage, which would not have occurred but for Lessee's operations and activities pursuant to this Lease and/or the use of the Leasehold, except to the extent any such damage or injury is caused by Lessor's negligence.

NO WARRANTY OF TITLE: This Lease is given without warranty of title, expressed or implied. The sole responsibility for confirming good title to the Leasehold shall be that of Lessee and Lessee shall perform any title searches at Lessee's sole cost and expense. In the event Lessee incorrectly confirms the title and ownership rights to the Leasehold, it shall forfeit any payments made to Lessor. Lessee shall bear the burden of securing a subordination of mortgage, if deemed necessary. Lessee shall provide a copy of such subordination to Lessor.

<u>UNITIZATION AND POOLING</u>: Notwithstanding anything to the contrary herein, with regard to any wells drilled, without the written consent of Lessor, the Leasehold may not be pooled or unitized with any other lands unless Lessor, in good faith, uses best efforts so that at least fifty percent (50%) of the pooled or unitized unit is comprised of lands within the Leasehold. In the event Lessee desires to pool or unitize the Leasehold with other lands and there is no spacing order previously established by a governmental or regulatory body, Lessee shall not have the right to form a production unit larger than 640 acres, provided however, units containing a horizontal well with a horizontal component longer than 5,000 feet may contain more than 640 acres as determined by this formula:  $A = [((L-5000) \times 0.064) + 640]$ , where A = unit size in acres, and L = the horizontal length of the wellbore in feet. No such calculation shall be made unless L is at least 5,150 feet. The lands included within the pooled or unitized unit for a well shall be as nearly as practicable in the form of a square or rectangle. Any pooled unit established in accordance with this paragraph shall be referred to herein as a "Unit".

PUGH CLAUSE: Upon expiration of the Primary Term or any extension thereof, in the event a portion or portions of the Leasehold is pooled or unitized with other land so as to form a Unit or Units; operations on, completion of a well upon, or production in commercially paying quantities from such pooled Unit(s) will not maintain this Lease in force as to the land not included in such Unit or Units, provided however, that if at the expiration of the Primary Term, and any extension thereof, Lessee is conducting operations (as defined in the paragraph entitled "Secondary Term") in any Unit containing any portion of the Leasehold, the Lease, as to the entire Leasehold, shall be maintained in force so long as Lessee continues to conduct operations in a diligent manner, with no more than ninety (90) days between the completion of one well and the commencement of the next.

LESSOR'S AUDIT RIGHTS: Lessor, upon thirty (30) days written notice to Lessee, shall have the right to audit, and/or copy, during normal business hours, Lessee's accounts, books and records, including, without limitation, any accounts, books, or records required to be kept or submitted to the Ohio Department of Natural Resources or other governmental agencies having jurisdiction over the activities contemplated by this Lease, for the purpose of verifying the accuracy of the reports and statements furnished to Lessor, and for checking the amount of payments lawfully due the Lessor under the terms of this Lease for any calendar year within the twenty-four (24) month period following the end of such calendar year. Lessee shall bear no portion of the Lessor's audit cost incurred under this paragraph. The audits shall not be conducted more than once each year without prior approval of Lessee.

ASSIGNMENT OF LEASE: Either party reserves the right to make an assignment of this Lease and all Exhibits thereto, provided that within thirty (30) days after such assignment is made the party who assigned the Lease must provide the name, address, phone number and contact person to whom the assignment was made. Lessee shall not assign this Lease without Lessor's prior written consent, which shall not be unreasonably withheld or delayed. Prior to Lessor's written consent to any such assignment, Lessee shall continue to be bound by all of the terms and conditions of this Lease and all of its obligations and liabilities hereunder. Lessee shall timely provide Lessor with a recorded copy of any such assignment.

SHUT-IN PAYMENT: For the purpose of calculating the Shut-in Royalty provided for in paragraph (D) of the section entitled "PAYMENTS TO LESSOR", the amount of the Delay Rental provided for in paragraph (A) of the section entitled PAYMENTS TO LESSOR" is amended to thirty-five dollars (\$35.00) per acre per year.

SHUT-IN LIMIT: Notwithstanding anything to the contrary herein, this Lease may not be maintained in force for any continuous period of time longer than two (2) consecutive years or three (3) cumulative years out of any four (4) consecutive year period after the expiration of the Primary Term, and any extension thereof, hereof solely by the provision of the shut-in royalty clause. The shut-in status of any well shall persist only so long as it is necessary to correct, through the exercise of good faith and due diligence, the condition giving rise to the shut-in of the well.

**INSURANCE:** Prior to conducting any operations or activities pursuant to this Lease, Lessee shall provide Lessor with a certificate of general liability insurance in the sum of at least Twenty Five Million Dollars (\$25,000,000,000) naming Lessor as additional insured covering the Leasehold and Lessor's property. This requirement shall remain in effect as long as Lessee has producing wells on a Unit including a portion of the Leasehold.

Lessee shall, at its sole expense, provide and maintain in full force and effect during the term of this lease such pollution liability insurance as shall protect the Lessor, the Lessee and its contractors, if any, from claims of environmental impairment and pollution from sudden, accidental, and/or a gradual release that may arise from or during the execution of this lease. The amount of pollution liability insurance shall not be less than \$5,000,000.00 per occurrence and \$10,000,000.00 in aggregate. Lessor shall be named as additional insured on Lessee's general liability and pollution liability policies as their interests may appear on Lessee's insurance.

Lessee shall provide Lessor with a certificate of insurance for its comprehensive general liability insurance and pollution liability insurance demonstrating the above coverage prior to beginning its operations or activities on a Unit containing any portion of the Leasehold.

Lessee shall advise Lessor of the cancellations of any insurance policy or surety bond required by this Lease immediately upon receipt of notice by Lessee of the cancellation and in no event later than thirty (30) days (ten (10) days for non-payment) prior to the effective date of the cancellation.

ARBITRATION: Any questions concerning this Lease or performance thereunder shall be ascertained and determined by three disinterested arbitrators, one thereof to be appointed by Lessor, one by the Lessee and third by the two so appointed as aforesaid and the award of such collective group shall be final and conclusive. Arbitration proceedings hereunder shall be conducted in the county where the Lease is filed, or in the county where the action occurred which caused the arbitration, or such other place as the parties to such arbitration shall all mutually agree upon. Each party will pay its own arbitrator and share costs of the third arbitrator equally.

<u>PAYMENTS</u>: Lessee shall tender payment and submit statements by the individual wells of the production and sales of oil, gas, other hydrocarbon products and other products within sixty (60) days of receipt by Lessee of payment of such production. When Lessee has failed to make any payment due under this lease for sixty (60) days, Lessee shall pay an additional twelve percent (12%) annual interest on the overdue amount calculated from the time of payment was due. Payment of such interest shall not waive Lessee's duty to make timely payments under this lease or limit Lessor's remedies for Lessee's failure to pay on time.

**BONUS PAYMENT:** Lessee agrees to pay Lessor a signing bonus of Six Thousand Two Hundred Dollars (\$6,200.00) for each acre contained within the Leasehold. The payment shall be made at the execution of the Lease for all of the Leasehold where Lessee has verified title. Lessee shall pay any other bonus amount within 90 days of execution of the Lease. By Lessor's signing this Lease, Lessor promises to proceed with this Lease and be bound thereby upon Lessee's paying the full amount of the bonus payment. Neither this Lease, nor any Memorandum of Lease shall be recorded by Lessee until the bonus payment has been received in full by Lessor, which receipt shall be acknowledged by Lessor in writing. All bonus payments, rentals and royalty payments made to Lessor under this Lease are nonrefundable.

LESSEE'S TERMINATION: Lessee may, at any time, or from time to time, surrender this lease or any portion thereof if Lessee is not then in default of any obligations under this lease; provided, however, that such surrender must be evidenced by written notice delivered to Lessor thirty (30) days prior to the effective date thereof, and that Lessee has performed all commitments with which Lessee is charged to the effective date of surrender. Any amount paid as an advance bonus or land rental, previous to the effective date of the surrender, shall be deemed liquidated damages due the Lessor and shall be in no way prorated or subject to claim by Lessee for return to Lessee.

RELEASE: Lessee shall not be granted a final release from the terms of this lease until all records and reports and other data described in this Lease have been provided to the Lessor, all wells required by the Lessor to be plugged have been plugged and plugging certificates provided, all other terms of this lease have been met, and the Lessor has met with Lessee's field engineer or other authorized representative and both parties have signed a Statement of Release.

FRESHWATER IMPOUNDMENTS AND LINERS: Lessee shall have no right to dig any pits on the Leasehold. Any impoundment within 1000 feet of the Leasehold shall: (i) conform to all applicable regulatory requirements (state, local and federal), (ii) be planned to be deep enough to allow at least thirty-six (36) inches of back fill over the liner after grading to surrounding pre-drill contour and (iii) promptly after completion of operations any backfill and the liners shall be removed and the impoundments shall be drained, prepared for burial, back filled, graded and planted within ninety (90) days (weather permitting). Lessee shall immediately notify Lessor and all applicable regulatory authorities if any impoundment lining is torn, punctured, or otherwise breached, allowing any fluid contained in an impoundment or designated to be contained in an impoundment to seep, leak or overflow through or around the liner.

The Lessee shall design, construct, operate and maintain all freshwater impoundments in accordance with the rules and regulations of the Ohio Department of Natural Resources. The location and construction of all freshwater impoundments must be approved by the Lessor in writing. Freshwater impoundments should not be located within 100 feet of a perennial stream, river, watercourse, water well pond lake or other body of water. The greatest depth of the impoundment should be a minimum of 20 inches above the seasonal high groundwater table. At least two (2) feet of freeboard must remain in the impoundment at all times. The impoundment should be structurally sound and the inside slopes of the impoundment are not steeper than a ratio of 2 horizontal to 1 vertical. The impoundment must be impermeable and lined with a synthetic flexible liner or alternate material that has a coefficient of permeability of no greater than 1 x 10<sup>-7</sup> cm/sec. The liner shall be of sufficient strength and thickness to maintain the integrity of the liner. The thickness of a synthetic liner shall be at least 30 mils. Adjoining sections of liners shall be sealed together in accordance with the manufacturer's directions to prevent leakage. Liner compatibility shall satisfy EPA Method 9090, Compatibility Test for Wastes and Membrane Liners, or other documented data approved by the Department.

All impoundments shall be constructed so that the liner subbase is smooth, uniform and free of debris, rock and other material that may puncture, tear, cut, rip or otherwise cause the liner to fail. The liner subbase and subgrade shall be capable of bearing the weight of the material above the liner without settling in an amount that will affect the integrity of the liner. If the impoundment bottom or sides consist of rock, shale or other material that may cause the liner to leak, a subbase of at least six (6) inches of soil, sand or smooth gravel, or a sufficient amount of an equivalent material shall be installed over the area as the subbase for the liner. Upon abandonment the impoundment shall be backfilled to the ground surface and graded to promote runoff with no depression that would accumulate or pond water on the surface. The stability of the backfilled impoundment shall be compatible with the adjacent land. The surface of the backfilled impoundment area shall be revegetated to stabilize the soil surface to establish a diverse, effective, permanent, vegetative cover which is capable of self-regeneration and plant succession.

# **SURFACE OPERATIONS:**

Notwithstanding anything to the contrary in the Lease, Lessee shall not have the right to use or occupy the surface of the Leasehold, including but not limited to, drilling activities, placing any equipment, roads, pipelines, utilities, living quarters, conducting geotechnical activities, conducting aerial spraying of any type, burning of brush or other waste materials, storing or placing any waste material upon any portion of the Leasehold. The following provisions shall apply under this Lease to all land in a Unit containing any portion of the Leasehold or located within one-half (½) mile from the Leasehold:

- a. <u>Compliance with Laws</u>. Lessee shall be responsible for any and all acts or matters arising out of or pertaining to Lessee's operations and activities on units containing any portion of the Leasehold whether reasonably foreseen or unforeseen. All operations and activities conducted by Lessee shall comply with federal, state and local law, statute, regulation and/or order, and the terms of this Lease, whichever is more strict. Lessee's failure to comply with any federal, state or local law or any regulation or order of any enforcement agency having jurisdiction over Lessee's operations shall be a default under this Lease.
- b. <u>Degree of Care</u>. Lessee shall at all times use the highest degree of care known in the industry, and all reasonable safeguards to prevent its operations and activities from:
  - i. causing or contributing to soil erosion;
  - ii. polluting or contaminating any environmental medium including the surface or subterranean soils and/or waters and ambient atmosphere in, on, under, or about the Leasehold and surrounding properties;
  - iii. decreasing the fertility of the soil;
  - iv. damaging crops, native or cultivated grasses, trees, or pastures;
  - v. harming or in any way injuring animals, whether domestic or wild on Units containing any portion of the Leasehold; and
  - vi. damaging buildings, roads, structures, improvements, farm implements, gates or fences.

Lessee shall dispose of salt water, frac water or liquid waste oil and other waste in accordance with the rules and regulations of the Ohio Department of Natural Resources and all other applicable governmental authorities.

Lessee shall clean up, remove, remedy and repair any soil or ground water contamination and damage caused by its operations and activities on Units containing any portion of the Leasehold or release of any contaminant in, on, under, or about units containing any portion of the Leasehold, whether or not caused by the negligence of Lessee. Lessee shall pay to any person beneficially interested in the harmed object all damages caused by Lessee's operations and activities.

c. <u>Disposal</u>. Lessee shall not use the Leasehold for the temporary or permanent disposal of any drill cuttings, or the storage or disposal of residual wastes. No disposal wells or any other devices or means of disposal of wastes or drilling liquids are permitted on the Leasehold.

The lessee shall perform all well drilling using closed-loop systems which employ a suite of solids control equipment to minimize drilling fluid dilution and provide for the economic handling of the drilling wastes. The closed-loop system should include a series of linear-motion shakers, mud cleaners and a centrifuge dewatering system, or any equipment or methods with the same result or effect of resulting in a "dry" location where the use of a reserve pit is not required and used fluids are recycled and solid wastes can be stored in tanks and transported offsite to a state approved landfill or other lawfully permitted disposal site.

- d. <u>Monitoring Wells</u>. In the event of a fluid discharge that is not contained within Lessee's containment system at a well site within a Unit containing any portion of the Leasehold, the lessee may be required to install groundwater monitoring wells which will be used to sample groundwater at the perimeter of the well site. Proper monitoring well design and construction should include consideration of site specific hydrogeologic conditions, and shall be in accordance with ODNR requirements. Lessee shall provide a record of any reportable release to Lessor as soon as practicable.
- e. <u>Use Subsurface Water</u>. Lessee shall not drill or operate any water well, take water, or inject any substance, except fluid for hydrofracturing into the subsurface or otherwise use or affect water in subsurface water formations.
- f. Revegetation. The surface of the land of any Unit containing any portion of the Leasehold shall be restored as nearly as practicable to its condition at the commencement of drilling operations. Restoration and reclamation revegetation shall be accomplished in accordance with seed mixes approved by the land owner or Lessor. The "A" horizon soils will be separated as part of pad construction as much as practicable and stockpiled separately. The topsoil pile will be used to facilitate subsequent reclamation and revegetation work.

The operator will support where practicable reclamation goals designed by the land owner to eliminate cool season grasses, such as fescue, in favor of legumes Also native shrub plantings adjacent to the vertical edge of the existing hardwood will be undertaken as practicable to provide visual buffering. The ultimate final reclamation will favor an early successional habitat where practicable and as approved by the land owner on the outer edge of the well pads and road systems. Lessor shall have the right to provide the revegetation plan.

- g. <u>Hazardous Materials</u>. Lessee shall not use, dispose of or release on the Leasehold or permit to exist or to be used, disposed of or released on the Leasehold or any Unit containing any portion of the Leasehold as a result of its operations and activities any substances (other than those Lessee has been licensed or permitted by applicable public authorities to use on the Leasehold) which are defined as "hazardous materials," "toxic substances" or "solid wastes" in federal, state or local laws, statutes or ordinances. Should any pollutant, hazardous material, toxic substances, contaminated waste or solid waste be accidentally released on the Leasehold, Lessee shall notify Lessor immediately after notifying the applicable governmental body of such event. Lessee shall be responsible for and timely pay all costs of clean-up, remediation, and other costs related to and arising from the event, including but not limited to penalties.
- h. <u>Firewalling and Maintenance of Production Equipment</u>. Dikes, firewalls or other methods of secondary containment must be constructed and maintained at all times around all tanks, separators and receptacles so as to contain a volume of liquid equal to at least 1.25 times the total volume of the largest vessel or interconnected vessels joined at the base located within the boundaries of the firewall within the Unit containing any portion of the Leasehold
- i. <u>Secondary Containment (Earthen Berms)</u>. Earthen berms used for secondary containment will be constructed of soil. The soil used to construct the berm will be compacted so that it yields a sufficient permeability constant to allow for containment of any spills or releases at the location until remediation can be performed. These berms will be constructed using an excavator to place the soil in a pile similar to a wind row along the area to be protected. This pile will then be compacted and graded so that the berm has side slopes no steeper than a 2:1 slope. The height of the berm will be determined by the amount of containment area required, but shall be no less than 1 foot above the pad elevation. Once constructed berms will be seeded and mulched.
- j. Secondary Containment (Metal panels / Liner). Secondary containment structures will be constructed using 33" galvanized corrugated metal panels (CMPs) in conjunction with a liner material. The panels will be bolted together to construct a containment area with a capacity equal to at least 1.25 times the volume of the largest tank. A layer of geotextile, a nonwoven needle punched polypropylene material with a permeability constant of 0.25 M/Sec, will be placed within the containment area as a protective layer for the liner material. The liner will be constructed of a 30 mill low density polyethylene geomembrane with heavy dense seam reinforcement. This impermeable membrane will be fastened to the top of the containment panels and laid on the floor of the containment over the membrane. Lessor shall utilize best practices in constructing Secondary Containment structures, including better materials and practices that may be available during this Lease.
- k. Notice and Location of Operations. The location of each well, pipe line, tank, access roadway and other structure or use area of the Lessee within 1/2 mile of the Leasehold or Unit containing any portion of the Leasehold must be provided in advance to the Lessor for review and comment within 30 days prior to construction, except as otherwise approved by Lessor in an emergency or other extenuating circumstance. Without limitation on the generality of the foregoing it is agreed that no such location of any well, tank or structure of any kind by the Lessee within the conservation pool area or within six hundred (600) feet of the shore line of Seneca Lake when at permanent pool elevation now or at the time such plan is provided, nor will such plan include the location of anything which would interfere in any manner with the construction, operation or maintenance of the dams, reservoirs or other structures provided for in the Official Plan of the Lessor or any modification or changes thereof, or any of the present or future recreation developments of the Lessor.
- Light and Sound Control. During well drilling, completion and production operations, Lessee shall use its best efforts to reduce night lighting pollution as much as reasonably practical, including but not limited to utilizing deflectors, low density sodium lighting, or fully shielded lighting consistent with Occupational Safety & Health Administration (OSHA) regulations. During well drilling, completion and production operations conducted in close proximity to residential or recreational facilities, Lessee shall use its best efforts to minimize the noise associated with such operations as much as reasonably practical, including but not limited to, installing sound barriers around the well pad or around specific pieces of equipment, limiting the use of jake brakes on trucks, use of low noise exhaust mufflers on generators, utilizing disk brakes on drilling rigs instead of drum brakes where practical, and orientation of the equipment on the well pad to direct exhaust noise from generators and pumps away from residential and recreational areas.
- m. Flaring. Lessee shall use its best efforts to minimize the frequency of any flaring, including but not limited to using high efficiency flares. As soon as gathering lines and other infrastructure are in place, Lessee shall use its best efforts to minimize, and eliminate if possible, all flaring. Lessee shall use redundant separators or both a high and low pressure separator to reduce potential emissions.
- n. <u>Notice of Materials to Be Used</u>. Whenever operationally feasible, Lessee, and any service provider engaged by Lessee, shall utilize non-hazardous or benign chemicals in conducting hydraulic fracturing operations. Lessee shall provide a list of chemicals and materials to be used during the hydraulic fracturing process prior to the commencement of completion operations.
- o. <u>Casing and Cementing Casing</u>. The Lessee shall case and cement a well to accomplish the following:

- (1) Allow effective control of the well at all times.
- (2) Prevent the migration of gas or other fluids into sources of fresh groundwater.
- (3) Prevent pollution or diminution of fresh groundwater.
- (4) Prevent the vertical migration of gas or other fluids behind the casing.

There shall be run and permanently cemented a string or strings of casing in each well drilled through the fresh water bearing strata to a depth and in a manner prescribed by regulation by ODNR. The Lessee shall equip the well with one or more strings of casing of sufficient length and strength to prevent blowouts, explosions, fires and casing failures during installation, completion and operation in accordance with the rules and regulations of ODNR. Casing shall be new steel casing and meet manufacturing standards, including American Petroleum Institute or equivalent specifications for pipe used in wells drilled to anticipated depths. All casing shall have been hydrostatically pressure tested with an applied pressure at least equal to or greater than the maximum pressure to which the pipe will be subjected in the well.

The amount and type of casing to be run shall be in accordance with current prudent industry and engineering practices and in accordance with the rules and regulations of the Department of Natural Resources. In making these determinations, the Lessee should consider the following: a) the maximum anticipated surface and down hole pressure; b) collapse resistance; c) tensile strength; d) chemical environment; and e) potential mechanical damage. While this section does not detail specific methods to achieve these objectives, the Lessee shall make every effort to follow the intent of the section, using good engineering practices and the best currently available technology.

Wellhead assemblies shall be used on wells to maintain surface control of the well. Each component of the wellhead shall have a pressure rating equal to or greater than the anticipated pressure to which that particular component might be exposed during the course of drilling, testing, or producing the well.

Where potential oil or gas zones are anticipated to be found at depths below the deepest fresh groundwater, the Lessee shall set and permanently cement surface casing prior to drilling into a stratum known to contain, or likely containing, oil or gas. The Lessee shall permanently cement by the displacement method the surface casing by placing the cement in the casing and displacing it into the annular space between the wall of the hole and the outside of the casing. Sufficient cement must be used to cement the casing back to surface.

If it is anticipated that cement used to permanently cement the surface casing cannot be circulated to the surface, a cement basket may be installed immediately above the depth of the lost circulation zone. Additional cement may be added above the cement basket, if necessary, by pumping through a pour string from the surface to fill the annular space.

The Lessee shall use cement that will resist degradation by chemical and physical conditions in the well and meet tests conducted using the equipment and procedures adopted by the American Petroleum Institute, as published in the current API RP 10B. The Lessee shall permit the cement to set to a minimum compressive strength in accordance with these specifications or a minimum period of 8 hours prior to the resumption of actual drilling. Where special cement or additives are used, the Lessee must request approval from the ODNR.

The Lessee shall provide Lessor with a copy of all casing and cement records for each well drilled pursuant to this Lease.

p. <u>Blowout Prevention</u>. The Lessee shall use blow-out prevention equipment when well head pressures or natural open flows are anticipated at the well site that may result in a blow-out or when the Lessee is drilling in an area where there is no prior knowledge of the pressures or natural open flows to be encountered. Blow-out prevention equipment used shall be in good working condition at all times. The blow-out preventer and all pipe fittings, valves and unions placed on or connected to the blow-out prevention systems shall have a working pressure capability that exceeds the anticipated pressures.

A minimum of two (2) remotely controlled hydraulic ram-type blowout preventers (one equipped with blind rams and one with pipe rams), valves, and manifolds for circulating drilling fluid shall be installed for the purpose of controlling the well at all times. The ram-type blowout preventers, valves, and manifolds shall be tested to 100% of rated working pressure, and the annular-type blowout preventer shall be tested at the time of installation.

The Lessee shall conduct a complete test of the ram type blow-out preventer and related equipment for both pressure and ram operation before placing it in service on a well. The Lessee shall test the annular type blow-out preventer in accordance with the manufacturer's published instructions, or the instructions of a professional engineer, prior to the device being placed in service.

When the equipment is in service, the Lessee shall visually inspect the blow-out prevention equipment during each tour of drilling operation and during actual drilling operations test the pipe rams for closure daily and the blind rams for closure on each round trip. Testing shall be conducted in accordance with American Petroleum Institute publication API RP53, "API Recommended Practice for Blowout Prevention Equipment Systems for Drilling Wells." The Lessee shall record the results of the inspection and closure tests in the drillers log after each occurrence. During drilling when conditions are such that the use of a blowout preventer can be anticipated, there shall be present on the rig floor a certified individual responsible to the Lessee who has satisfactory completed an approved well control course or equivalent.

Lessee shall provide Lessor with a copy of all blow-out prevention testing records referenced in this section.

q. <u>Completion Well Control</u>. Upon completion of the drilling operations at a well, the Lessee shall install and utilize equipment, such as a shut-off valve of sufficient rating to contain anticipated pressure, lubricator or similar device, as may be necessary to enable the well to be effectively shut-in while logging and servicing the well both during and after completion of the well.

Equipment capable of controlling appropriate pressure shall be used to clean out the composite frac plugs and sand during post-fracturing operations. All blowout prevention equipment should be tested after its installation and before its use. Operations shall be, at a minimum, consistent with the below requirements or any equipment or methods with the same result or effect. A minimum of two pressure barriers should be in place during all post-fracturing operations. A remote controlled, independently powered blowout preventer unit, which allows workers to control the unit at a safe distance of a minimum of 100 feet from the well and operational during all post-frac cleanout operations. A minimum of one well site supervisor who has a current well control certification should be on the site during post-frac cleanout operations. Operations shall be conducted in accordance with all applicable state and federal regulations.

A sign with ODNR's 24-hour emergency telephone number and local emergency response telephone numbers should be posted prominently at the well site entrance.

# r. <u>Hydrogen Sulfide Areas</u>.

- i. In the event Lessee proposes to drill a well in an area through the same formation where hydrogen sulfide has been found while drilling, Lessee shall install monitoring equipment during drilling at the well site to detect the presence of hydrogen sulfide in accordance with American Petroleum Institute publication RP49, "Recommended Practices for Safe Drilling of Wells Containing Hydrogen Sulfide." When hydrogen sulfide is detected in concentrations of 20 ppm or greater, the well shall be drilled in accordance with American Petroleum Institute publication API RP49, "Recommended Practices for Safe Drilling of Wells Containing Hydrogen Sulfide."
- ii. In the event Lessee drills and/or operates a well in which hydrogen sulfide is discovered in concentrations of 20 ppm or greater, Lessee shall operate the well in a way that presents no danger to human health or to the environment. The Lessee shall notify ODNR and Lessor of the location of the well and the concentration of hydrogen sulfide detected.

# s. <u>Best Management Practices</u>

Before conducting earth disturbance activities the operator must propose, develop, implement and maintain a Best Management Practice (BMP) to minimize the potential for accelerated erosion and sedimentation and to manage post construction storm water. The BMPs shall be undertaken to protect, maintain, reclaim and restore water quality at the well site. Activities, facilities, measures, planning or procedures shall be used to minimize accelerated erosion and sedimentation and management of storm water to protect, maintain, reclaim, and restore the quality of waters and the existing and designated uses of waters within this construction area before, during, and after earth disturbance activities on Units containing any portion of the Leasehold.

An Erosion and Sedimentation (E&S) Plan must also be developed and provided to Lessor 30 days prior to construction for timely review and comment, except as otherwise approved by Lessor in an emergency or other extenuating circumstance, which contains plan maps that show the location of features including surface waters of this well site and surrounding areas, drainage patterns, field and property boundaries, buildings and farm structures, animal heavy use areas, roads and crossroads, and soils maps on Units containing any portion of the Leasehold. The E&S Plan must contain an implementation schedule. Earth disturbance activities shall be planned and implemented to the extent practicable in accordance with the following:

- (1) Minimize the extent and duration of the earth disturbance.
- (2) Maximize protection of existing drainage features and vegetation.
- (3) Minimize soil compaction.
- (4) Utilize other measures or controls that prevent or minimize the generation of increased storm water runoff.

The E&S Plan must contain drawings and narrative which describe the following:

- (1) The existing topographic features of the operation site and the immediate surrounding area.
- (2) The types, depth, slope, locations and limitations of the soils.
- (3) The characteristics of the earth disturbance activity, including present and proposed land uses and the proposed alteration to the operation site.
- (4) The volume and rate of runoff from the operation site and its upstream watershed area.
- (5) The location of all surface waters of this surrounding area which may receive runoff within or from the operation site.
- (6) A narrative description of the location and type of perimeter and onsite BMPs used before, during and after the earth disturbance activity.
- (7) Plan drawings.
- (8) Procedures which ensure that the proper measures for the recycling or disposal of materials associated with or from the operation site will be undertaken in accordance with BMP and the Clean Water Act and other applicable Federal and State laws.
- (9) The management of post construction storm water shall be planned and conducted to the extent practicable to preserve the integrity of stream channels and maintain and protect the physical,

biological and chemical qualities of the receiving stream, prevent an increase in the rate of storm water runoff, minimize any increase in storm water runoff volume, maximize the protection of existing drainage features and existing vegetation and minimize land clearing and grading.

(10) The BMP shall include the above as a minimum and be consistent with ODNR requirements.

# t. <u>Preparedness, Prevention and Contingency Plan</u>

A written plan that identifies an emergency response program, material and waste inventory, spill and leak prevention and response, inspection program, housekeeping program, security and external factors, and that is developed and implemented at the operation site to control potential discharges of pollutants into waters of the State. This plan shall be provided to Lessor 30 days prior to construction for timely review and comment, except as otherwise approved by Lessor in an emergency or other extenuating circumstance.

- (1) If, because of an accident or other activity or incident, a toxic substance or another substance which would endanger downstream users of the waters of the State, would otherwise result in pollution or create a danger of pollution of the waters, or would damage property, is discharged into these waters, it is the responsibility of the operator of the well site to immediately notify the ODNR and the MCWD by telephone of the location and nature of the danger and, if reasonably possible to do so, to notify known downstream users of the waters.
- (2) In addition to the notices a person shall immediately take or cause to be taken steps necessary to prevent injury to property and downstream users of the waters from pollution or a danger of pollution. The Lessee may not operate, maintain or use or permit the operation, maintenance or use of a wastewater impoundment for the production, processing, storage, treatment or disposal of pollutants.
- (3) Each well site will use a 60 mil synthetic liner under and around the drilling rig and hydraulic fracturing operations to prevent any discharge of floating materials, oil, grease, scum, foam, sheen or substances which produce odor, or have turbidity or settle to form deposits in concentrations or amounts sufficient to be, or create a danger of being harmful to the water uses that are to be protected or to human, animal, plant or aquatic life. The liner shall be installed with a vertical wall or edge or other protective equipment in accordance with industry standards to prevent any accidental discharge of waste material, oils, chemicals, etc. The diked and lined area shall be properly maintained to allow only minimal quantities of these liquids from accumulating. All liquids pumped or collected from the diked and lined area shall be disposed of in a proper manner in accordance with Federal and State rules and regulations.
- (4) The well site shall also be diked in accordance with industry standards to prevent any accidental fluid releases from being discharged onto adjacent lands and water bodies. All fluids collected from the drill site must be disposed of in a proper manner in accordance with Federal and State rules and regulations. The lessee shall not allow wastes to be disposed, buried, dumped, or discharged on the grounds of the Lessor.
- (5) In addition the Lessee shall provide prompt and adequate response to all emergencies and accidental spills of polluting substances for the protection of public health, animal and aquatic life and for recreation. Oil and gas well operators must prepare and implement a plan describing the measures to prevent pollution of the surface water and groundwater and for the control and disposal of pollutional substances and waste. During an emergency, the Lessee's emergency coordinator should activate alarm systems, notify emergency response agencies, identify the problem, assess the health or environmental hazards, and take all reasonable measures to stabilize the situation. The emergency coordinator should also be responsible for follow-up activities after the incident such as treating, storing, or disposing of residues and contaminated soil, decontamination and maintenance of emergency equipment, and submission of any reports.
- (6) Efforts should be made to familiarize police, fire departments, emergency response teams, and the County Emergency Management Coordinator with the layout of the well site and dangers associated with the hazardous materials handled, places where personnel would normally be working, entrances to roads to the operations, and the possible evacuation routes.
- (7) The plan shall include the above as a minimum and be consistent with ODNR requirements.

<u>LESSOR LIABILITY</u>: The Lessor shall not be liable for any damages of any kind to the wells, pipe lines or other property of the Lessee, or any one claiming under it, and resulting from the operation of dams, reservoirs or other structures owned, constructed or maintained by the Lessor or the United States of America.

<u>BUILDING RESTRICTION</u>: No buildings, production storage tanks, or tank batteries of the Lessee shall be constructed below the spillway elevation of 842.5'above mean sea level at the Seneca Lake, with the exception of pipelines, or other structures approved by the United States of America Corps of Engineers.

<u>SITE PLAN</u>: A detailed location and site plan may be required by Lessor. This plan must show the dimensions of the clearing, the dimensions, elevations and locations of pits, roads and protective levees, extent of clearing, and location of pipe lines for any Unit containing any portion of the Leasehold.

NOTICE: All notices and other papers to be served by the Lessee upon the Lessor shall be deemed to be sufficiently served if sent by registered or certified mail addressed to the Lessor at its address hereinbefore appearing or to such other address as the Lessor may hereafter, by notice in writing to the Lessee designate for that purpose. All notices and other papers to be served by the Lessor shall be deemed to be sufficiently served if sent by registered or certified mail addressed to the Lessee at 1625 17<sup>th</sup> Street, Denver, CO 80202, Attn: Vice President, Land or to such other address as the Lessee may hereafter, by notice in writing to the Lessor, designate for that purpose.

SITE ACCESS: Lessor or its representative may obtain access to the Lessee's areas of operation, to the extent permitted by leases in the unit, as applicable. This access must be preceded by reasonable notice to the Lessee's representative designated by the Lessee. Lessee shall allow access within two (2) hours after requested when possible, but in no event shall restrict access for greater than eight (8) hours. Access pursuant to this paragraph shall be at Lessor's sole risk, except for negligence or gross negligence by Lessee. Lessor or its representative must adhere to all safety procedures at all times while present on the Lessee's areas of operation.

<u>TESTING, OPERATIONS AND PROCEDURE REQUIREMENTS:</u> For any testing, operations or procedure requirements listed above, Lessee may conduct similar or equivalent tests, operations or procedures, if the end result provides for the same level of protection or greater, in the instance that industry best practices change or requirements and regulations are changed.

<u>WATER RE-CYCLE</u>: Lessee shall use best efforts to recycle as much of the water used in completion operations as possible.

<u>COMMUNITY MEETINGS:</u> Prior to commencement of initial drilling operations pursuant to this Lease, Lessee shall hold an informational meeting that is open to the general public and located in the vicinity of the Leasehold.

ANNUAL MEETINGS WITH LESSOR: Prior to commencement of drilling operations, and on an annual basis thereafter, Lessee shall meet with Lessor to discuss Lessee's annual drilling and development plan, including any seasonal limitations on drilling operations. In addition to such annual meeting, Lessee shall be available to discuss any operational or development issues upon request by Lessor.

<u>CONSENT:</u> Notwithstanding anything to the contrary in this Lease, in every instance in which the consent of Lessor or Lessee is required, and such consent is not subject to a separate agreement requirement under this Lease, such consent shall not be unreasonably withheld, conditioned or delayed.

NO THIRD PARTY BENEFICIARIES: Notwithstanding anything to the contrary in this Lease, this Lease is only intended to benefit the parties hereto, and their respective permitted successors and assigns.

By:

Muskingum Watershed Conservancy District
John Hoopingarner
Executive Director/Secretary

By:

Antero Resources Appalachian Corporation

Name:

Mand Mander

SIGNED FOR IDENTIFICATION ONLY:

Witness

# **ACKNOWLEDGEMENT**

STATE OF OHIO ) COUNTY OF JUSCAVAWAS	
On this, the list day of Forum, 20 personally appeared John Hoopingarner, know person(s) whose name(s) is/are subscribed to the executed the same for the purposes therein contains	within instrument, and acknowledged that they
IN WITNESS WHEREOF, I hereunto set	•
My	Commission Expires: April 27, 2016
Sign	Commission Expires: <u>April 27, 2016</u> nature/Notary Public: <u>Rebecca J Warfield</u> ne/ Notary Public (print): <u>Rebecca J Warfield</u>
Nan	ne/Notary Public (print): Rebecca J Warfield
STATE OF Ohio COUNTY OF TUSCArawas	
On this, the <u>Olst</u> day of <u>February</u> personally appeared <u>Chris Treml</u> , kr person(s) whose name(s) is/are subscribed to the executed the same for the purposes therein conta IN WITNESS WHEREOF, I hereunto set my har	within instrument, and acknowledged that they ined.
My	Commission Expires: April 27, 2016
Sign	nature/Notary Public: Rubecca J Warfuld
Nan	nature/Notary Public: Rubeua J Warfield ne/ Notary Public (print): Relacead Warfiel

**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

1 62.3000 62.3000
62.3000
-
+ + + +
ML 11 & 12 ML 12 ML 12
Richland Richland Richland
Guernsey Guernsey Guernsey
310002733000 310002733000 310002733000 310002735000 310002735000
G-37-5       310002733000         G-37-5       310002733000         G-38-5       310002733000         G-38-5       310002733000         G-35-5       310002735000         G-34-5       310002735000

**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated <u>February 21st, 2013</u>, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

MWCD Acq ID			_			•			
143 c		County	Townshin	Section or Military	ΔM	Range	Tract Gross Arres	MWCD Net	Source
3 CV I W		County	dinsing	Lot (#)	(#)	(#)	יומני פופים שמבים	Leasehold Acres	Deed
7-C+T-N	010050042000	Noble	Beaver	72	8	4	11.8600	11.8600	95-309(DR)
N-142-S	None	Noble	Beaver	26	8	7	31.3000	31,3000	90-121(DR)
N-131-S	010050039000	Noble	Beaver	31	8	7	10.4000	10.4000	89-293(DR)
N-155-S	010050040000	Noble	Beaver	31	8	7	21.4600		94-81(DR)
N-134-S	010021311000	Noble	Beaver	32	8	7	14.9000	14.9000	123-59(DR)
N-135-S	010050038000	Noble	Beaver	32	8	7	60.7000	60.7000	90-121(DR)
N-139-S	010050041000	Noble	Beaver	33	8	7	23.6000		90-121(DR)
N-165-S	230021104000	Noble	Marion	30	7		0008:9	9:3000	89-618(DR)
N-158-S	230021101000	Noble	Marion	36	7	7	3.5000	3.5000	89-573(DR)
N-156-S	230021099000	Noble	Marion	36	7	7	11.2000	11.2000	89-618(DR)
N-159-S	230021100000	Noble	Marion	36	7		38.6600	38.6600	94-81(DR)
N-161-S	230021092000	Noble	Marion	36	7	7	40.0000	40.0000	89-220(DR)
S-86-N	310021202000	Noble	Seneca	13	8	8	88.9000	88.9000	92-536(DR)
S-66-N	310051061000	Noble	Seneca	13	8	8	99.7500	99.7500	92-422(DR)
N-100-S	310051062000	Noble	Seneca	13	8	8	103.8000	103.8000	93-26(DR)
S-96-N	310021204000	Noble	Seneca	13	8	8	119.2400	119.2400	92-538(DR)
S-26-N	310021205000	Noble	Seneca	13	8	8	120.0000	120.0000	93-29(DR)
N-91-S	310021198000	Noble	Seneca	14	8	8	1.3100	1.3100	107-489(DR)
N-91-S	310021198000	Noble	Seneca	14	8	8	16.8600	16.8600	89-121(DR)
S-68-N	310021226000	Noble	Seneca	14	8	8	31.1000	31,1000	92-144(DR)
N-85-S	310021224000	Noble	Seneca	14	8	8	40.0000	40.0000	90-86(DR)
N-88-S	310021199000	Noble	Seneca	14	8	8	20.0000	25.3000	90-194(DR)
N-90-S	310021227000	Noble	Seneca	14	8	8	50.9000	50.9000	92-101(DR)
N-87-S	310021223000	Noble	Seneca	14	8	8	78.0000	78.0000	94-6(DR)
N-86-S	310021222000	Noble	Seneca	14	8	8	78.9000	78.9000	90-86(DR)
N-87-S	310021295000	Noble	Seneca	15	8	8	2.0000	2.0000	94-6(DR)
N-84-S	310021296000	Noble	Seneca	15	8	8	15.8000	15.8000	93-49(DR)
N-84-S	310021298000	Noble	Seneca	15	8	8	79.3000	79.3000	93-49(DR)
N-152-S	310021118000	Noble	Seneca	24	80	80	0000'2	7.0000	92-591(DR)

**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian

	Range Tract Gross Acres MWCD Net Source (#)	8 12.5000 12.5000 93-63(DR)	8 97.0000 97.0000 92-538(DR)	32.4000	8 0.3300 0.3300 92-417(DR)	8 8.0000 8.0000 92-419(DR)	70.0000	8 74.6400 74.6400 94-96(DR)	8 75.0000 75.0000 131-571(DR)	0.5000	8 1.5000 1.5000 89-194(DR)	8 46.3000 19.2041 89-396(DR)	8 50.0000 50.0000 89-393(DR)		8 75.5000 74.5487 89-396(DR)	8 76.0000 76.0000 131-571(DR)	8 149.4600 150.4600 7968(CPJ)	8 153.0000 153.0000 94-96(DR)	4.1000	8 25.0000 25.0000 89-393(DR)	8 30.0000 30.0000 89-399(DR)		8 59.6000 59.6000 7862(CPJ)	8 116.0000 116.0000 89-194(DR)	8 149.9000 149.9000 89-394(DR)	2-884(OR)	
	Range (#)	~	∞	1	80	8	80	80	8	00	00	88	8	'	8	8	8	8	8	8	8	8	8	8	80		c
Corporation (Lessee).	Section or Military TWP (#)	24 8	24 8	2 1	2 8	2 8	2 8	2 8	2 8	3 8	3	3 8	3		3 8	3 8	3 8	8 8	4 8	4 8	4 8	8 8	4 8	4 8	4 8		•
	Township	Seneca	Seneca	Wayne	Wayne	Wayne	Wayne	Wayne	Wayne	Wayne	Wayne	Wayne	Wayne	;	Wayne	Wayne	Wayne	Wayne	Wayne	Wayne	Wayne	Wayne	Wayne	Wayne	Wayne		- acrossina
	County	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble		Noble	Nobie	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble	Noble		altoN
	Parcei Number	310021119000	310021120000	None	360021121000	360021221000	360021163000	360021137000	360021164000	360021137000	360021129000	360021129000	360021129000		360021129000	360021127000	360021130000	360021120000	370021274000	370021278000	370021276000	370021275000	370021277000	370021273000	370021276000		370021274000
	MWCD Acq iD	N-151-S	N-96.5-S	N-109-S	N-80-S	N-105-S	N-107.5-S	N-108-S	N-107.25-S	N-116.5-S	N-62-S	 N-63-S	N-65-S	3	N-63-5	N-108.5-S	N-66-5	N-79-S	N-44-S	N-47-S	N-45-S	N-3-5	N-44-S	N-48-S	N-46-S		N-42-4



**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated February 21st, 2013, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian Corporation (Lessee).

MWCD Acq ID         Parcel Number           N-42-5         370021291000           N-42-5         370021291000           N-7-5         370021000           N-1-5         370021287000           N-42-5         370021287000           N-42-5         370021287000           N-42-5         37002128000           N-42-5         370021270000           N-42-5         370021270000           N-50-5         370021272000           N-50-5         370021269000           N-50-5         370021269000           N-81-5         360021184000           N-81-5         360021185000           N-81-5         360021185000           N-81-5         370021285000	000 000 000 000 000 000 000 000 000 00	County Noble Noble	Township	Section or Military Lot (#)	<b>₹</b>	Range	Tract Gross Acres	MWCD Net Leasehold Acres	Source Deed
	00 00 00 00 00 00 00 00 00 00 00 00 00	Noble Noble		Lot (#)	=			Leasehold Acres	Deed
	000000000000000000000000000000000000000	Noble Noble			,	(#)			
	000000000000000000000000000000000000000	Noble	Wayne	5	8	8	4.3000	4.3000	7862(CPJ)
	000000000000000000000000000000000000000		Wayne	5	8	8	5.0000	2:0000	94-150(DR)
	000000000000000000000000000000000000000	Noble	Wayne	5	8	8	21.0000	21.0000	149-586(DR)
	000000000000000000000000000000000000000	Noble	Wayne	5	<b>0</b> 0	œ	35.2000	35.2000	334-513(DR)
	000000000000000000000000000000000000000	Noble	Wayne	5	8	8	110.1000	61.1380	89-444(DR)
	000000000000000000000000000000000000000	Noble	Wayne	5	8	8	154.7600	154.7600	94-150(DR)
	000000000000000000000000000000000000000	Noble	Wayne	8	8	8	4.3700	4.3700	93-612(DR)
	000	Noble	Wayne	6	8	8	0.8000	0.8000	89-194(DR)
	000	Noble	Wayne	6	8	8	0.9440	0.9440	154-532(DR)
	000	Noble	Wayne	6	8	8	2.0000	2.0000	153-788(DR)
		Noble	Wayne	6	œ	80	7.5100	7.5100	92-378(DR)
	000	Noble	Wayne	6	8	œ	159.0000	159.0000	92-17(DR)
	000	Noble	Wayne	10	8	8	1.4300	1.4300	7968(CPJ)
	000	Noble	Wayne	10	8	8	30.5000	30.5000	92-546(DR)
-	000	Noble	Wayne	10	8	8	39.0000	39.0000	7968(CPJ)
	000	Noble	Wayne	10	8	8	40.0000	40,0000	92-377(DR)
N-83-S 360021186000	000	Noble	Wayne	10	8	8	44.4000	44.4000	93-49(DR)
N-81-S 360021177000	000	Noble	Wayne	10	8	8	29.9000	29,9000	131-571(DR)
N-61-S 360021184000	000	Noble	Wayne	10	8	8	141.2000	141.2000	92-384(DR)
N-61-S 370011286000	000	Noble	Wayne	10	8	8	160.0000	160,0000	92-384(DR)
N-104-S 360021167000	000	Noble	Wayne	11	8	8	1.0900	1.0900	20-738(OR)
N-104-S 360021173000	000	Noble	Wayne	11	8	8	2.0000	2.0000	92-418(DR)
N-104-S 360021173000	000	Noble	Wayne	11	8	8	8.0000	8.0000	92-418(DR)
N-104-S 360021166000	000	Noble	Wayne	11	8	8	150.0000	134.5294	131-571(DR)
N-101-S 360021175000	000	Noble	Wayne	11	8	8	153.0000	153.0000	92-144(DR)
N-103-S 360021220000	000	Noble	Wayne	11	8	8	160.0000	160.0000	92-538(DR)
N-102-S   360021174000	000	Noble	Wayne	11	8	8	171.0000	171.0000	95-501(DR)
N-124-S 360021240000	000	Noble	Wayne	12	8	8	15.1000	15.1000	92-536(DR)
N-127-S 360021235000	000	Noble	Wayne	12	8	8	16.0000	16.0000	92-421(DR)

**EXHIBIT B** 

Attached to and made a part of that certain Oil and Gas Lease dated <u>February 21st, 2013</u>, by and between Muskingum Watershed Convservancy District (Lessor) and Antero Resources Appalachian (Corporation (Lessee).

Г		Γ							Γ	Γ	Γ-										П
Source	Deed	89-120(DR)	92-549(DR)	89-620(DR)	93-26(DR)	89-620(DR)	92-549(DR)	92-381(DR)	92-417(DR)	89-502(DR)	92-415(DR)	89-502(DR)	89-293(DR)	94-49(DR)	93-63(DR)	92-627(DR)	89-432(DR)	92-536(DR)	90-121(DR)	90-121(DR)	92-538(DR)
MWCD Net	Leasehold Acres	39.0000	40.0000	40.0000	44.6000	79.6000	133,1000	164.0000	4.0000	0006'9	52.0000	81.0000	1.0000	20.0500	64.7000	00000:59	78.1000	9.1000	65.1000	49,5000	79.0000
	Tract Gross Acres	39.0000	40.0000	40.0000	44.6000	0009:62	133.1000	164.0000	4.0000	0006:9	52,0000	81.0000	1.0000	20.5000	64.7000	0000:59	78.1000	9.1000	65.1000	49.5000	79.0000
Range	(#)	8	80	8	8	8	8	80	1	1	1	1	7	7	7	7	7	7	7	7	7
- dWL	(#)	8	8	8	8	8	8	8	. 1	1	1	1	88	8	8	8	8	8	8	8	8
Section or Military	Lot (#)	12	12	12	12	12	12	12	77	22	22	77	31	31	31	31	31	32	32	33	33
	Township	Wayne																			
	County	Noble																			
	Parcel Number	360021236000	360051079000	360021235000	360021231000	360021235000	360021232000	360021230000	360021114000	360021113000	360021114000	360021114000	360021003000	360021006000	360021004000	360021004000	360021004000	360021010000	360021009000	360021018000	360021019000
!	MWCD Acq ID	N-123-S	N-125-S	N-120-S	N-122-S	N-120-S	N-125-S	N-121-S	N-116-S	N-114-S	N-115-S	N-109-S	N-153-S	N-128-S	N-154-S	N-129-S	N-130-S	N-132-S	N-133-S	N-136-S	N-137-S