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WV MEMORANDUM OF LEASE FORM
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MEMORANDUM OF OIL AND GAS LEASE

THIS MEMORANDUM OF OIL AND GAS LEASE ("Memorandum"), dated this 6 day of February, 2019, by and between the WEST VIRGINIA DIVISION OF NATURAL RESOURCES, a division of the West Virginia Department of Commerce, whose address is 324 Fourth Avenue, South Charleston, West Virginia 25303, hereinafter called "Lessor" (whether one or more) and ANTERO RESOURCES CORPORATION, whose address is 1615 Wynkoop Street, Denver, CO 80202, hereinafter referred to as "Lessee".

WITNESSETH:

WHEREAS, Lessor has entered into an Oil and Gas Lease with Lessee dated 6 day of February, 2019, (the "Lease") and

WHEREAS, for good and valuable consideration, and additional consideration for the preferential right to purchase as described below, the receipt of which having been acknowledged and accepted by the Lessor, the Lessor did grant, demise, lease and let exclusively unto Lessee the lands hereinafter described for the purposes of exploring by geological and geophysical and other methods, (including, but not limited to, conducting seismic surveys), drilling either vertically or horizontally, operating for, producing oil or gas or both including methane gas present in or associated with all formations, horizons, strata or zones as more particularly described in the Lease, and the exclusive right to inject air, gas, water, brine or other fluids into the subsurface strata and any and all other rights and privileges necessary, incident to, or convenient for the economical operation of the lands, alone or conjointly with neighboring lands for these purposes, together with the right and easement to construct, operate, repair, maintain, resize and remove pipelines, telephone, power and electric lines, tanks, ponds, roadways, plants, equipment and structures thereon to produce, save, store and take care of such substances

WHEREAS, said lands being described in the Lease as situated in District of Ellsworth, County of Tyler, State of West Virginia, and being bounded now or formerly substantially as follows, to wit:

On the North by lands of: Anthony Mathew Goff Irrevocable Trust
On the East by lands of: West Virginia Department of Natural Resources
On the South by lands of: West Virginia Department of Natural Resources
On the West by lands of: Asa Ash

Said lands, as of the date of the Lease being identified for tax purposes as tract or parcel number 2-29-7 Notwithstanding said tax map and parcel designation, the Lease shall be effective as to the tract actually owned by Lessor whether or not the tax map designation correctly identifies the location or acreage of the tract. Being also the same tract described in Deed Book dated August 19, 1980 and recorded in the Office of the Clerk of the County Commission in and for Tyler County, State of West Virginia, in Deed Book 227, Page 141. It being the purpose and intent of Lessor to lease, all interests in the lands above described now owned or hereafter acquired by Lessor, and all strips or parcels of land now owned by Lessor, or hereafter acquired which adjoin the above described lands. For all purposes of the Lease, including determining the amount of delay rentals, royalties and shut-in royalties thereunder, said land shall be deemed to contain 7.5 gross acres, more or less, of which the Lessor owns an approximate 0.46875 net mineral acres, more or less (the "Leased Premises"), whether it actually contains more or less. For all purposes of this Memorandum, references to oil and gas or either of them shall mean oil, or gas, or both and all substances which are constituents of, or produced with, oil or gas, whether similar or dissimilar, or produced in a gaseous, liquid, or solid state (as further defined in Paragraph 1 of the Lease), and

WHEREAS, the primary term of said Lease commenced Feb 6, 2019 for a term of FOUR (4) YEARS. The primary term of the Lease shall be extended for as long thereafter as oil and/or gas is produced from the Leased Premises or lands with which the Lease is unitized or pooled; or Lessee is in the active search for oil and/or gas; or as long as drilling operations are continuously prosecuted as provided in the Lease; or as long as the Leased Premises shall be operated or otherwise maintained by Lessee, its successors or assigns, in accordance with the terms and provisions of the Lease, unless earlier terminated in accordance with the terms and provisions of the Lease, and

WHEREAS, pursuant to the terms of the Lease, [any acreage not included in a pooled unit at the end of the primary term shall be released / any formations not included in a pooled unit at the end of the primary term shall be released.

WHEREAS, the parties hereto incorporate all terms, covenants, provisions, conditions, royalties, shut-in royalties, and rentals as set forth in the Lease by reference as though fully written and set forth herein. In the event the Lease is amended or supplemented by written instrument executed by the parties in interest thereto or assigned or terminated in any manner permitted under the terms thereof, then without any further act or instrument whatsoever, this Memorandum shall likewise and to the same effect be amended, assigned or terminated, as the case may be. This Memorandum is executed in simplified short form for the convenience of the parties and for the purpose of recording the same and this Memorandum shall not in any way have the effect of modifying, supplementing or abridging the Lease or any of its provisions now or hereafter in force and effect.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first above written, signed and acknowledged in the presence of:

WEST VIRGINIA DIVISION OF NATURAL RESOURCES,
ON BEHALF OF ITSELF AND OF THE STATE OF WEST VIRGINIA

Kepti A. Rooney

ATTEST:

[Signature]

By: Stephen S. McDaniel, Director
West Virginia Division of Natural Resources

ACKNOWLEDGEMENT FOR WEST VIRGINIA DIVISION OF NATURAL RESOURCES

State of West Virginia

County of Kanawha

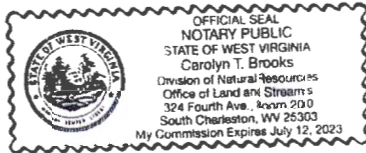
Personally appeared before me, the undersigned Notary Public, within and for said County and State, STEPHEN S. MCDANIEL, to me known to be the person who subscribed the name of the West Virginia Division of Natural Resources, a division of the West Virginia Department of Commerce, to the foregoing instrument, as its Director, and acknowledged to me that he executed the same as his free and voluntary act and deed and as the free and voluntary act and deed of such West Virginia Division of Natural Resources, a division of the West Virginia Department of Commerce, for the uses and purposes herein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and Notary Seal on this 6th day of February, 2019.

My Commission Expires: 7-12-23

[Signature]
Notary Public

(SEAL)



Tract No. 2-29-7 Jug WMA
Sale 0.46875 ac
Lease No. _____
OG-19-VI/48-399

**THE STATE OF WEST VIRGINIA OIL AND GAS LEASE
NO SURFACE USE
(4 YEAR PAID-UP LEASE)**

This Oil and Gas Lease (this "Lease") is dated and effective as of 6th February, 2019, (the "Effective Date"), by and between the **WEST VIRGINIA DIVISION OF NATURAL RESOURCES**, a division of the West Virginia Department of Commerce, whose address is **324 Fourth Avenue, South Charleston, West Virginia 25303**, party of the first part, hereinafter designated as **LESSOR**, and **ANTERO RESOURCES CORPORATION**, a Delaware corporation, whose address is **1615 Wynkoop Street, Denver, Colorado 80202**, party of the second part, hereinafter designated as **LESSEE**.

UNDER AND PURSUANT TO THE PROVISIONS OF THE CONSTITUTION AND LAWS OF THE STATE OF WEST VIRGINIA RELATING TO LEASING PUBLIC LANDS BELONGING TO THE STATE OF WEST VIRGINIA, WITNESSETH:

1. Grant of Lease. In consideration of the bonus of Three Thousand Twenty-One Dollars (\$3,021.00) per net mineral acre paid at closing to Lessor, the royalties to be paid, and the covenants, obligations, stipulations and conditions to be observed and performed as herein set forth, Lessor does hereby demise, lease and let unto the Lessee the following described tracts of land for the sole purpose and with the exclusive right of exploring, drilling, completing, operating for, and producing oil, gas, and other liquid or gaseous hydrocarbons (including, by way of example and not limitation, any and all natural gas liquids such as butane, ethane, isobutane, natural gasolines, pentanes, propane, and similar liquids or byproducts) produced in association with the oil or gas in or underlying the Leased Premises (the "Granted Minerals"), situated in Ellsworth District, Tyler County, West Virginia, and being more particularly described as follows:

On the North by lands of: Anthony Mathew Goff Irrevocable Trust
On the East by lands of: West Virginia Department of Natural Resources
On the South by lands of: West Virginia Department of Natural Resources
On the West by lands of: Asa Ash

The referenced minerals underlie The West Virginia Division of Natural Resources Tract located in Ellsworth District, Tyler County, West Virginia, being the area underlying the said tract, described as tax map 29, parcel 7, containing 7.5 gross acres, more or less, of which the Division of Natural Resources owns an approximate 0.46875 net mineral acres, more or less (the "Leased Premises"). Lessor represents and warrants to Lessee that the West Virginia Division of Natural Resources is the proper agency or instrumentality of the State of West Virginia to enter into this Lease for the purpose of leasing the Granted Minerals and Leased Premises to Lessee on the terms set forth herein, and that the Director of the West Virginia Division of Natural Resources is vested with the full legal authority and is duly authorized to execute this Lease on behalf of the Lessor and the State of West Virginia.

2. Limitations on the Grant of Lease.

a. **Surface Activities Prohibited.** This lease does not include, and specifically prohibits and excludes the right to enter upon or conduct exploration for, drilling, and production and marketing activities of any kind associated with the Granted Minerals, or any other activities by Lessee, its representatives, employees, contractors, agents, and affiliates, on the surface of the lands covered herein, if any, including, but not limited to the construction of any pits and/or pipelines or gathering lines on the Leased Premises.

b. **No Storage.** Lessee may not use the Leased Premises, or any part thereof, for gas, oil, hydrocarbons, or brine storage purposes.

c. **Use of Surface or Subsurface Water.** Lessee shall not use the surface waters or the groundwaters located within the Leased Premises and shall not diminish or impair the riparian rights, consumptive or non-consumptive water rights or groundwater of the State of West Virginia within or adjoining the Leased Premises or any private riparian landowner adjoining the Leased Premises within said State.

d. **Reserved Rights of Lessor.** Lessor reserves all rights not granted in this Lease, and specifically excepts herefrom all minerals other than the Granted Minerals including, by way of example and not limitation,

geothermal energy, salt, brine, coal and coalbed methane.

3. Facilities Development. All development and production activities and facilities shall be constructed on adjoining and/or other lands, but not the Leased Premises, and above and outside the high water mark of the Ohio River, other waterways or islands therein, except to the extent that horizontal well laterals are located underneath the bed, banks and shores of the same.

4. Term. This Lease shall remain in force for a term of Four (4) years from the date hereof ("Primary Term"), and as long thereafter as Granted Minerals are produced from the Leased Premises or on acreage pooled therewith, or drilling operations are continued as hereinafter provided. If, at the expiration of the Primary Term of this Lease, Granted Minerals are not being produced on the Leased Premises or on acreage pooled therewith, but Lessee is then engaged in drilling or re-working operations thereon, then this Lease shall continue in force for so long as operations are being continuously prosecuted on the Leased Premises or on acreage pooled therewith ("Operations"). Operations shall be considered to be continuously prosecuted if not more than one hundred twenty (120) consecutive days shall elapse between the completion or abandonment of one well and the beginning of operations for the drilling of a subsequent well. If after discovery of Granted Minerals on the Leased Premises or on acreage pooled therewith, the production thereof should cease from any cause after the Primary Term, this Lease shall not terminate if Lessee commences additional drilling or re-working operations within one hundred twenty (120) days from date of cessation of production or from date of completion of a dry hole. If Granted Minerals shall be discovered and produced as a result of such operations at or after the expiration of the Primary Term of this Lease, this Lease shall continue in force so long as Granted Minerals are produced from the Leased Premises or on acreage pooled therewith.

5. Unitization. Lessee may voluntarily pool, consolidate, or unitize portions of the Leased Premises as to hydrocarbon bearing geologic formations in order to constitute a unit for the purpose of exploring for and producing Granted Minerals. Said unit may not exceed Six Hundred Forty (640) acres and shall be comprised of lands contiguous to the Leased Premises and/or in the vicinity of the Leased Premises, provided: that the unit may, with the written consent of Lessor, be larger, but no greater than One Thousand, Two Hundred and Eighty (1,280) acres, which consent shall not be unreasonably withheld, if that unit, in comparison to a unit of Six Hundred Forty (640) acres, shall provide for the greater development of the Granted Minerals in compliance with the diligent development and protection from drainage requirements of Paragraph Fourteen of this Lease. Once formed, the unit(s) may not be reformed, re-pooled, altered, amended, or changed in any manner without the prior written consent of Lessor, which consent shall not be unreasonably withheld, conditioned or delayed. In the event the Leased Premises are so pooled, consolidated or unitized, Lessor agrees to accept such proportion of the production royalty prescribed by this Lease as the acreage contributed by this Lease bears to the total acreage comprising any such unit(s).

6. Pugh Clause – Horizontal and Vertical. As to any acreage of the Leased Premises which is not included within any properly constituted and publicly recorded production unit at the expiration of the Primary Term, as extended hereunder, this Lease shall automatically terminate, and be of no further force or effect. Further, and to the extent Lessee has established production in paying quantities beyond the expiration of the Primary Term on the Leased Premises, or lands pooled therewith, the Lease shall terminate, on a production unit-by-production unit basis, as to all depths, horizons and zones lying at least One Hundred feet (100') below the deepest producing horizon on the Leased Premises or any lands pooled therewith determined by reference to the deepest producing horizon in each respective production unit. Thereafter, this Lease shall continue in full force and effect for all depths, horizons and zones lying above the depth of One Hundred feet (100') below the deepest producing formation of a particular production unit as to all acreage located within that particular production unit. Upon the drilling and completion of a well within a production unit containing at least a portion of the Leased Premises, Lessee shall file a declaration of pooling and unitization within a reasonable time in the records of the Office of the Clerk of the County Commission of the county in which the applicable Granted Minerals are situated.

7. Royalty.

a. Delivery and Payment. Lessee shall deliver or cause to be delivered to the Lessor, or its successors, nominees, agents, or assigns, at no cost to Lessor, a royalty equal to **Twenty Percent (20%) or One-Fifth of Eight Eighths (1/5 of 8/8ths)** of the Gross Proceeds realized by Lessee, or any Affiliate of Lessee, from the sale of the Granted Minerals, produced and sold from the Leased Premises.

i. Gross Proceeds. Gross Proceeds means the total monies and other consideration accruing to Lessee for the disposition of the Granted Minerals and/or any other marketable by-products, including condensate, produced from the Leased Premises. Gross Proceeds shall be calculated based on the total gross volume of Granted Minerals produced and sold, exclusive of production and post-production costs and severance taxes or other taxes of any nature.

ii. Affiliate of Lessee. Affiliate of Lessee means any person, corporation, firm, or other entity in which Lessee, or any parent company, subsidiary or affiliate of Lessee, owns an interest of Five Percent (5%) or

more, whether by stock ownership or otherwise, or over which Lessee, or any parent company or affiliate of Lessee exercises any degree of control, directly or indirectly, by ownership, interlocking directorate, or in any other manner; and any corporation, firm or other entity which owns any interest in Lessee, whether by stock ownership or otherwise, or which exercises any degree of control, directly or indirectly, over Lessee, by stock ownership, interlocking directorate, or in any other manner.

b. **Due Dates of Royalty.** Lessee shall pay Lessor all royalties that may become due under this Lease within one hundred twenty (120) days after the first day of the month following the month during which any well commences production into a pipeline for sale of such production. Thereafter, all royalties shall be paid to Lessor on or before the last day of the third month following the month of production or within Ninety (90) days after the first day of the month following, whichever is longer.

c. **Automatic Termination for Non-Payment of Royalty.** If royalty is not paid within the time prescribed in the preceding sub-section entitled Due Dates of Royalty, Lessor will provide Lessee written notice of nonpayment of royalty in accordance with paragraph 32 of this Lease. If Lessee fails to pay Lessor royalty actually due and owing to Lessor within Thirty (30) days from Lessee's receipt of such notice, this Lease will automatically terminate. Inaccurate royalty payments shall not be governed by the provisions of this paragraph 7(a)(c), but shall be resolved in good faith between Lessor and Lessee in a timely manner.

d. **Production & Post-Production Costs.** Neither Lessee, nor any Affiliate of Lessee, may reduce Lessor's royalty for any post-production expense, including, by way of example and not limitation, pipelines, surface facilities, telemetry, gathering, dehydration, transportation, fractionation, compression, manufacturing, processing, treating, or marketing of the Granted Minerals or any severance or other taxes of any nature paid on the production thereof. Royalties under this Lease shall be based on the total proceeds of sale of the Granted Minerals, exclusive of any and all production and/or post-production costs.

8. **Method of Payment.** All rents, royalties, bonuses, or other payments accruing and/or owing from Lessee to Lessor under this Lease shall be made or tendered in either of the following manners:

- a. By certified or cashier check delivered in accordance with paragraph 32 of this Lease, or
- b. By direct deposit or wire transfer to the credit of Lessor as provided in writing by Lessor to Lessee in writing by a separate instrument delivered contemporaneously with this Lease.

9. **Information, Metering, Lessor's Right to Audit.** Upon request, Lessee shall furnish to Lessor copies of title opinions covering the Leased Premises; copies of filings made by Lessee with the Department of Environmental Protection related to the Leased Premises; copies of daily drilling reports, gauge tickets, sales receipts, division orders, or amounts of gross production; copies of gas contracts or any other agreements pursuant to which Lessee will sell, use, transfer, process, or dispose of the Granted Minerals produced from the Leased Premises; and/or any other information related to the production and sales of the Granted Minerals. Lessee shall meter gas deriving from the Leased Premises at the wellhead in accordance with West Virginia law. Lessor shall, on an annual basis, upon reasonable prior written notice to Lessee, have the right to audit the books, accounts, contracts, records, and data of Lessee pertaining to the development and sale of the Granted Minerals.

10. **Quarterly Royalty Statement, Annual Report.** Lessee shall furnish an annual report, including production volumes and sales prices, to the Lessor not less than annually on the anniversary date of this Lease, unless otherwise requested by Lessor. The Lessee shall include the following information no less frequently than once per calendar quarter, either on the check stub of a royalty payment or on an attachment to or enclosure with a royalty payment:

- a. The lease, property, or well names and the well identification numbers on which royalties are being paid;
- b. The month and year during which the sales occurred for which payment is being made;
- c. The total production from the well or wells expressed as the number of barrels of oil or the total amount of gas in million cubic feet (MCF) and the volume of any other Granted Minerals, condensate, or other constituents therein which were sold
- d. The price per barrel of oil and per MCF of gas sold; and
- e. The name, address, and telephone number of a contact person where the Lessor may obtain information about royalty payments made by the Lessee hereunder

11. **Shut-In Royalty.** If a well has been completed capable of production in paying quantities, and has been temporarily shut-in for lack of a market, Lessee shall pay Lessor annually, on or before Ninety (90) days

of such shut-in event, the sum of One Hundred (\$100.00) Dollars per acre for the first year, and Two Hundred Fifty Dollars (\$250.00) per acre for the year thereafter on the ensuing anniversary. In no event may Lessee maintain this Lease by payment of shut-in royalty beyond a continuous two-year period, and this Lease shall terminate automatically on the first day following the second anniversary date of initial shut-in. Additionally, in no event may Lessee maintain this Lease by payment of shut-in royalty beyond a cumulative three-year period during which all production of Granted Minerals was shut-in, and this Lease shall terminate automatically on the first day following the date that all production of Granted Minerals has been shut-in for a cumulative period of Three (3) years.

12. Notice of Intent to Drill and Complete. Lessee shall supply Lessor prior written notice of Lessee's intention to drill at least fourteen (14) calendar days prior to the spudding in of a well associated with producing the Granted Minerals. Lessee shall also supply Lessor with a copy of Lessor's completion report of such well or wells within thirty calendar (30) days of completion.

13. Diligence, Duty to Drill Offset Wells. Lessee shall conduct its drilling operations hereunder utilizing best industry practices in existence at the time of such drilling, and shall otherwise conduct its operations in a good and workmanlike manner as a reasonably prudent operator would under the same or similar circumstances until all drilling and producing operations are completed, or until such time as the final well is plugged and abandoned. Additionally, if Granted Minerals are discovered on or in the Leased Premises, Lessee shall further develop and produce the Leased Premises as a reasonable and prudent operator would, and exercise all due diligence in drilling additional well(s) as may be necessary to fully develop the Leased Premises. Lessee shall protect the Granted Minerals in and under the Leased Premises from drainage by wells on adjoining or nearby tracts or leases, including those held by Lessee or any Affiliate of Lessee. Neither the rentals, royalties, nor any other consideration set forth under this Lease shall relieve Lessee of its obligation to reasonably develop and produce the Leased Premises and to reasonably protect the Granted Minerals in and under the Leased Premises from drainage or other damage.

14. Waste Prohibited, Damage. Lessee shall not commit, or cause to be committed, waste, damage, or pollution to the Leased Premises. Lessee shall take all reasonable steps to prevent its operations from causing or contributing to soil erosion, or to the injury of terraces, grades, embankments, other soil, or structures on the Leased Premises. Lessee shall not pollute the surface or subterranean waters of the Leased Premises, any reservoirs, springs, streams, irrigation ditches, stock ponds, or other wells on the Leased Premises. Lessee shall not decrease the fertility of the soil, damaging any crops, grasses, timber, or pastures on the Leased Premises, and shall not harm or injure any animals, fish, or livestock on or in the Leased Premises, or damage any buildings, roads, structures, or other improvements on the Leased Premises. Lessee shall preserve the Leased Premises, and upon the termination of this Lease, promptly surrender and return the Leased Premises to the Lessor in the same condition, or substantially similar condition, as the Leased Premises were in prior to Lessee taking possession of the Leased Premises. Lessee shall compensate Lessor, its successors or assigns, for damages caused by Lessee to any being or thing which is the subject of this provision.

15. Well Plugging. Before abandoning any well associated with this Lease, Lessee shall securely plug and abandon such well or wells in accordance with the rules and regulations of the West Virginia Department of Environmental Protection and the laws of the State of West Virginia, and any other governmental agency having jurisdiction.

16. Record Management. The Lessee shall keep an accurate account of all drilling operations, including but not limited to the following: a log of each well drilled; original gas sales contracts with amendments; gas balancing agreements and schedules; information concerning litigation, settlement agreements, or other agreements relating to sales and pricing of the Granted Minerals.

17. Ratification. No instrument executed by Lessor shall be effective to constitute a ratification, renewal, extension or amendment of this Lease unless such instrument is clearly titled to indicate its purpose and intent.

18. Compliance with Applicable Law. This Lease shall be subject to the Constitution and laws of the State of West Virginia and the rules and regulations of the West Virginia Division of Natural Resources and the West Virginia Department of Environmental Protection now or hereafter in force, all of which are made a part and condition of this Lease; provided, that no regulation made after the execution of this Lease affecting either the length of the term hereof, the rate of royalty, or payment hereunder, or the assignment hereof, shall operate to alter the terms and conditions of this Lease. Lessee agrees to comply in all material respects with the laws, rules and regulations of the State of West Virginia and the United States of America.

19. Insurance. A company licensed by the West Virginia Insurance Commission to do business in the state of West Virginia shall underwrite all policies required by this Lease. Lessee, and/or any person or entity acting on Lessee's behalf under this Lease, shall maintain with one or more such licensed insurance carriers at all times during which this Lease remains in force and effect sufficient workers compensation and employer's

liability insurance, commercial general liability and umbrella liability insurance, business auto and umbrella liability insurance, and environmental liability insurance in the amount of at least Twenty-Five Million Dollars (\$25,000,000.00), combined single limit, identifying Lessor as an additional insured (except for workers compensation and employer's liability), and shall be primary coverage for Lessor. Said policy or policies, declaration pages and certificates of insurance thereof shall be delivered to Lessor upon commencement of the Lease, and upon each renewal of said insurance policy. The insurance policies required under this paragraph 19 shall name Lessor as an additional insured, except for workers compensation and employer's liability with regard to the Leased Premises, and shall reflect that the insurer has waived any right of subrogation against the Lessor.

20. Bonding. Within Thirty (30) days from the Effective Date of this Lease, Lessee shall post a surety bond in favor of the Lessor in an amount of Two Hundred Thousand Dollars (\$200,000.00) to secure payment of all sums due and performance of all obligations arising under this Lease.

21. Assignment. The rights and estate of Lessee (or any permitted assignee or transferee of Lessee) hereunder may not be assigned or otherwise transferred, in whole or in part, without the prior written consent of Lessor, which consent shall not be unreasonably withheld. In the event Lessee proposes to assign or transfer this Lease, the Lessee shall give Lessor written notice of its intent to assign or transfer its interest in the Lease, which notice shall specify the type of assignment or transfer contemplated, the identity and contact information of the proposed assignee or transferee, and the timeframe of the proposed assignment or transfer ("Transfer Notice"). Upon delivery of a Transfer Notice to the Lessor, Lessor shall have Fifteen (15) days to either: (a) consent to the proposed assignment or transfer by delivering written its consent to Lessee; or (b) in its reasonable discretion, withhold its consent to the proposed assignment or transfer by delivering written notice to Lessee that it is withholding its consent and specifying the reasons therefor. In the event that Lessor fails to respond to a Transfer Notice within the fifteen-day period specified in the immediately preceding sentence, Lessor shall be deemed for all purposes under the law to have approved the assignment or transfer outlined in the Transfer Notice, and to have consented to such assignment or transfer in the same manner as if it would have delivered its written consent to Lessee.

22. Default. The occurrence of any of the following shall be deemed a default of this Lease:

- a. Failure of Lessee to timely pay Lessor any amounts required under this Lease in accordance with paragraph 7.
- b. If any creditor of Lessee, its agents, and/or assigns, takes any action to execute on, garnish, or attach the Lessee's assets located on or accessing the Leased Premises. This provision shall not impair Lessee's ability to mortgage its interests in the Granted Minerals or the Leased Premises.
- c. Failure of Lessee to obtain any requisite "prior written consent" as set forth within this Lease.
- d. Failure of Lessee to maintain insurance in the type and amount as set forth within this Lease.
- e. Shut-in of Lease exceeding the periods set forth in paragraph 11 of this Lease.

23. Notice of Default or Breach. If Lessor considers that Lessee has failed to comply with its obligations under this Lease, whether express and implied, Lessor shall notify Lessee in writing, setting out in what respects Lessee has breached this Lease. Lessee shall then have Thirty (30) days after receipt of said notice to cure all alleged breaches asserted by Lessor or, if it is not practical to cure such alleged breaches within thirty (30) days, then Lessee shall have Thirty (30) days to commence curing the alleged breach and diligently and continuously pursue to completion such cure. If Lessee, having received such written notice of breach of Lease, shall thereafter fail or refuse to satisfy in the timeframes set forth in the immediately preceding sentence, or respond in a meaningful fashion to Lessor's notice within such Thirty (30) day period, or such longer period of time if Lessee is in good faith continuously effectuating a cure of such alleged breach(es), this Lease shall automatically cease and terminate. Upon such termination, Lessee agrees to (a) immediately and unconditionally surrender possession of the Leased Premises, or of the portion of the Leased Premises included in such notice of breach, and (b) plug and abandon any producing or non-producing well(s).

24. Remedies for Default or Breach. The Lessor shall be entitled to recover from the Lessee any and all royalties, charges, or claims of every kind and nature due and owing and/or arising out of this Lease, upon failure to comply with the provisions of this Lease, and to take immediate possession of the Leased Premises. If Lessor institutes proceedings to clear title or take possession of the Leased Premises, Lessor shall be entitled to recover from Lessee its reasonable attorney fees and costs, investigation costs, any expert fees, and any other reasonable costs or expenses related to such proceedings.

25. Surrender of Lease. The Lessee may surrender this Lease or any part of this Lease if, and only if, Lessee is not then in default of any obligations under this Lease and upon payment of all liabilities then accrued and due. Such surrender must be evidenced by written notice delivered to Lessor Thirty (30) days

prior to the effective date of surrender. Lessee shall deliver to Lessor a release or releases in recordable form approved by Lessor, and Lessee shall release the applicable portion of this Lease upon expiration. Lessee may not release any portion of this Lease included in a pool or unit as long as Operations are being conducted on such pool or unit. Any partial release must describe all depths and horizons in and under the Leased Premises so released.

26. No Warranty of Title.

a. Lessor makes no representation of title or ownership, either express or implied, and further makes no warranty as to the actual or potential presence of Granted Minerals. Lessee represents it has performed all necessary due diligence regarding the title or ownership of the Granted Minerals, and agrees to be bound by the quantum of acreage as set forth in the Legal Description above.

b. Lessee shall notify Lessor of any adverse claim to the Leased Premises affecting title to all or a portion of the rights to develop the Granted Minerals, and Lessor may, with the approval of the Attorney General, enter into an escrow arrangement for future rents and royalties accruing to such disputed portion of the Leased Premises under terms and conditions that the Attorney General feels proper to safeguard the rights and interest of the State of West Virginia.

c. If an adverse claimant files suit against the State of West Virginia or against Lessee claiming title to all or a portion of the Granted Minerals, or if the Lessee, after receiving notice of an adverse claim, institutes litigation in a court of competent jurisdiction to adjudicate the validity of the claim, the rents and royalties accruing to the litigated portion shall be placed in an escrow account until such time as the ownership of the disputed interest is finally determined by a court of competent jurisdiction.

d. If a court of competent jurisdiction determines that Lessor does not have title to all or part of the Granted Minerals in the Leased Premises, the rentals, royalties, and bonus thereafter accruing from any part as to which this Lease covers less than the full interest in such Granted Minerals, shall thereafter be paid only in the proportion which the interest therein, if any, covered by this Lease bears to the whole and undivided fee simple estate therein. Any sums of money paid pursuant to this Lease are not reimbursable to Lessee.

27. Indemnity. Unless caused by the negligence of Lessor, or any agent, servant, or employee of Lessor, Lessee shall defend, indemnify, protect and hold harmless Lessor and Lessor's successors, representatives, agents and/or assigns from and against any and all claims, demands, causes of action, liability, loss, damage or expense of any and every kind and nature, including without limitation costs, expenses, and attorneys' fees, for injury (including death), or damage to persons or property (including environmental damage to the surface, waterways, or subsurface estates of any person, firm, corporation, or other entity) arising out of, incidental to, or resulting from (i) the operations or activities of Lessee or Lessee's servants, agents, employees, guests, licensees, invitees or independent contractors on or in the Leased Premises; (ii) the exercise of any right granted under this Lease, and/or; (iii) any obligation imposed under this Lease. Any successor in interest of any rights of Lessee in this Lease shall likewise be obligated to defend and indemnify Lessor and Lessor's successors, representatives, agents and assigns in the same manner as the original Lessee.

28. Limitations on Drilling. From and after the Effective Date of this Lease, Lessee shall not commence construction of any new wellpad that is intended to produce the Granted Minerals from the Leased Premises if such wellpad would be located within Five Hundred feet (500') of any outside boundary of the tracts comprising the Leased Premises measured linearly from any point along said tract boundary to the midpoint of the secondary containment berm of a particular wellpad. Lessor and Lessee agree that the limitation on pad construction and/or location set forth in this paragraph 28 is intended to reduce any long-term, substantial interference with the public's use of the surface of the Leased Premises as it exists on the date of the Lease. Further, if Lessor determines in its reasonable discretion after conducting a proper investigation that the drilling activities of Lessee related to the production of Granted Minerals from the Leased Premises have created a long-term, substantial interference with the public's use of the surface of the Leased Premises as aforesaid, then Lessor shall have the right to seek from Lessee additional measures or controls to mitigate such long-term, substantial impairment caused by Lessee's said drilling activities.

29. Force Majeure. If Lessee is prevented from complying with its obligations under this Lease, express or implied (except payment of money), due to scarcity of or inability to obtain or use equipment or material or by operations of Force Majeure, or any federal or state law, or any order, rule or regulation, then, while so prevented, Lessee's obligation to comply with such this Lease shall be temporarily suspended, and Lessee shall not be liable in damages; and this Lease shall be extended only so long as Lessee is prevented by any such cause from conducting Operations on or in the Leased Premises; *provided*, in no event shall Lessee's performance be suspended as a result of Force Majeure, federal or state law, or any rule or regulation for a period in excess of two (2) consecutive years. As used herein, the term "Force Majeure" shall mean acts of god such as flood, fire, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike or labor disputes, or by other cause(s) not within Lessee's control, but shall specifically **exclude** scarcity, cost, or inability to obtain or use equipment, contracts, personnel, water, or other material(s).

30. Further Assurances. Each of the parties hereto shall, and shall cause its respective affiliates to, from time to time at the request of the other party, without any additional consideration, furnish the other party such further information or assurances, execute and deliver such additional documents, instruments and conveyances, and take such other actions and do such other things, as may be reasonably necessary in the opinion of counsel to the requesting party to carry out the provisions of this Lease. In the event that Lessor is not the proper agency or instrumentality of the State of West Virginia to enter into this Lease, as stated in paragraph 1 herein, Lessor shall cause all of the proper agencies or instrumentalities of the State of West Virginia, without any additional consideration, to join in this Lease, as Lessor, upon the same terms provided herein.

31. Governing Law. This Lease shall be governed by the laws of the State of West Virginia and any dispute arising out of this Lease shall be resolved in a West Virginia court of law having jurisdiction thereof.

32. Notices and Payments. All notices and payments which are permitted or required under this Lease shall be in writing and shall be deemed valid and received if delivered personally; by registered or certified mail, return receipt requested; or by special carrier (such as Federal Express or UPS), with signature required, to the Lessor and/or the Lessee to the following addresses, unless otherwise agreed by the parties in a signed writing:

a. **To Lessor:**

West Virginia Division of Natural Resources
Attn: Office of Land and Streams
324 Fourth Ave, Room 200
South Charleston, WV 25303-1228

b. **To Lessee:**

Antero Resources Corporation
1615 Wynkoop Street
Denver, CO 80202

33. Successors in Interest. The terms, conditions, covenants, obligations, considerations or requirements of this Lease shall extend to and be binding upon the parties hereto, their successors, executors, administrators, and assigns, all of whom shall be jointly and severally liable.

34. Severability. Should any one or more of the provisions in this Lease become or be adjudicated by a court of competent jurisdiction to be void or invalid, in whole or in part, the remainder of this Lease shall remain in full force and effect.

35. Counterparts. This Lease may be executed in any number of counterparts, and by different parties in separate counterparts, all of which shall be identical. Each such counterpart shall be deemed to be an original instrument, but all such counterparts together shall constitute but one instrument.

[Signatures to follow]

IN WITNESS WHEREOF, the parties hereunto subscribed their signatures on the day and year first above written.

WEST VIRGINIA DIVISION OF NATURAL RESOURCES, ON BEHALF OF ITSELF AND OF THE STATE OF WEST VIRGINIA

Sept. G. Looney
ATTEST:

Stephen S. McDaniel
By: Stephen S. McDaniel, Director
West Virginia Division of Natural Resources

ACKNOWLEDGEMENT FOR WEST VIRGINIA DIVISION OF NATURAL RESOURCES

State of West Virginia

County of Kanawha

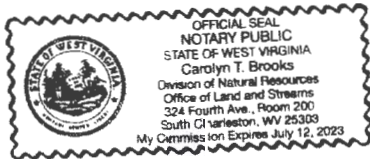
Personally appeared before me, the undersigned Notary Public, within and for said County and State, STEPHEN S. MCDANIEL, to me known to be the person who subscribed the name of the **West Virginia Division of Natural Resources, a division of the West Virginia Department of Commerce**, to the foregoing instrument, as its Director, and acknowledged to me that he executed the same as his free and voluntary act and deed and as the free and voluntary act and deed of such West Virginia Division of Natural Resources, a division of the West Virginia Department of Commerce, for the uses and purposes herein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and Notary Seal on this 6th day of February 2019.

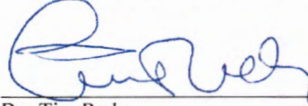
My Commission Expires: 7-12-23

Carolyn T. Brooks
Notary Public

(SEAL)



ANTERO RESOURCES CORPORATION



By: Tim Rady
Title: Vice President - Land

TRM

ATTEST:

ACKNOWLEDGEMENT FOR ANTERO RESOURCES CORPORATION

STATE OF COLORADO)

COUNTY OF DENVER)

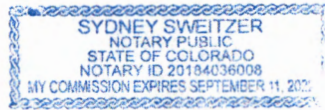
On this 7 day of February, 2019 before me Sydney Sweitzer, the undersigned Notary, did personally appear Tim Rady, who acknowledged himself to be the Vice President-Land of Antero Resources Corporation, a corporation, and that he, as such Vice President-Land, being authorized to do so, executed the foregoing instrument for the purposes therein contained on behalf of the corporation, by signing the name of the corporation by himself as Vice President - Land.

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

[SEAL]

My Commission Expires: 9-11-22

Sydney Sweitzer
Notary Public



This Instrument prepared by:
Larry W. George, Esq.
Special Assistant Attorney General
West Virginia Department of Commerce
One Bridge Place, Suite 205
10 Hale Street
Charleston, West Virginia

Exhibit B

