

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

April 8, 2014

Via E-mail
Paul M. Rady
Chief Executive Officer
Antero Resources Midstream, LLC
1625 17th Street
Denver, Colorado 80202

Re: Antero Resources Midstream LLC

Amendment No. 1 to Registration Statement on Form S-1

Filed March 21, 2014 File No. 333-193798

Dear Mr. Rady:

We have reviewed your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

General

1. We acknowledge the supplemental materials that you furnished to us in response to prior comment 6 in our letter dated March 7, 2014. However, it is unclear from the supplemental materials provided how you determined that the Appalachian Basin is the second largest overall gas producer (third bullet point of prior comment 6) and how you determined that the focus of producers shifted over the past five years from shallower to deeper reservoirs (fourth bullet point of prior comment 6). Please provide an expanded response to address the third and fourth bullet points of our prior comment 6.

Summary, page 1

Our Existing Assets and Growth Projects, page 5

Gathering and Compression, page 5

2. We note your inclusion of oil pipeline mileage in your table of information regarding your gathering and compression system as of December 31, 2013 and your expectations for organic growth in such assets as of December 31, 2014 within the most recent amendment on pages 5 and 114. We presume by inclusion in the table that such assets are owned and operated by you. However, it does not appear that a discussion of any oil pipeline assets have been included within your business description, assumptions related to estimated cash available for distribution for the twelve-month period ending March 31, 2015, MD&A or your financial statements. Please explain or revise.

Our Cash Distribution Policy and Restrictions on Distributions, page 54

Estimated Cash Available for Distribution for the Twelve-Month Period Ending March 31, 2015, page 60

- 3. We note from your disclosure in the second paragraph on page 60 that your forecast of estimated cash available for distribution is provided to support your belief that you will have sufficient cash available to allow you to pay cash distributions at the minimum quarterly distribution rate. We also note your disclosure on page F-8 that you make distributions on the basis of available cash and not earnings. Please tell us whether the calculation of Available Cash, which directly impacts the actual cash distribution that will be made, contemplates that the GP could hold cash back from distribution for certain reasons. If so, please confirm our assumption that no such cash hold backs are anticipated at March 31, 2015 and disclose this to your investors. If cash hold backs are anticipated, it appears that your forecast should be adjusted for such cash reserves that would reduce the amount available to meet the minimum quarterly distribution.
- 4. We note on page 61 you reconcile to both "Adjusted EBITDA" and "Estimated Cash Available for Distribution" from "Net Income." We also note your disclosure on page 67 that you have excluded stock compensation expense you expect to incur from your projected general and administrative expense for the twelve-month period ending March 31, 2015. While we note your disclosure on page 67 that these amounts are non-cash, it is unclear to us why you believe excluding stock compensation expense, which is required to be recognized under U.S. GAAP, would allow you to refer to the amount presented on page 61 as "Net Income." Additionally, it appears by excluding these amounts comparability issues now exist between this projection and your unaudited proforma cash available for distribution on page 58. Please revise or explain.

5. Refer to your disclosure regarding maintenance and expansion capital expenditures on pages 68 and 69. Please tell us whether you anticipate any capital expenditures during the forecasted period that would have characteristics of both maintenance and expansion. If not, please explain in detail why no such expenditures are expected to exist. Otherwise, please revise your disclosure to explain how you determine the portion to be allocated to maintenance and the portion to be allocated to expansion and quantify the total amount allocated and where it was classified. We believe this is useful information for your investors because many capital expenditures have varying degrees of *both* maintaining and expanding an asset. Given the subjective judgment in classifying such dual purpose expenditures, quantification is necessary. We may have further comment.

Security Ownership of Certain Beneficial Owners and Management, page 134

6. We note your response to prior comment 27 in our letter dated March 7, 2014. We reissue the comment. Please disclose, by footnote or otherwise, the natural person(s) who have investment and/or voting power over the shares owned by Antero Resources Midstream Management LLC. Please refer to Question 140.02 of our Regulation S-K Compliance and Disclosure Interpretations, by analogy.

Certain Relationships and Related Transactions, page 136

Services Agreement, page 138

7. We note your response to comment 28 in our letter dated March 7, 2014. To the extent you have disclosed in the "Our Cash Distribution Policy and Restrictions on Distributions" section the amounts you expect to incur in connection with the services agreement and partnership agreement, please provide such disclosure under the appropriate subheading of this section, as well.

Unaudited Pro Forma Financial Statements of Antero Midstream Partners LP

Unaudited Pro Forma Statement of Operations For the Year Ended December 31, 2013, page F-4

8. We note your response to comment 31 in our letter dated March 7, 2014. Please confirm our understanding that you will enter into, or have a commitment, agreement or draft agreement for, a new revolving credit facility and will utilize the terms of such facility in the development of your pro forma adjustment to interest expense, and include this adjustment along with revised disclosure in an amendment prior to requesting effectiveness. To the extent you are unable to confirm this, we will have additional comments.

Notes to Unaudited Pro Forma Financial Statements

Pro Forma Adjustments, page F-6

- 9. Please tell us and disclose how you developed your estimate of interest expense. For example, what average outstanding balance and unused revolver capacity were utilized in developing the interest expense balance, and how were they determined. Please provide supporting calculations to assist our understanding.
- 10. We note your response to comment 33 in our letter dated March 7, 2014, including your statement that *under your partnership agreement*, all units (common and subordinated, including the common units issued in the offering) will begin with the same per unit capital account equal to the price per unit that the public will pay in the offering. As the amount of capital contributed by purchasers of common units issued in the offering will likely be in excess of the amount contributed by Antero on a per unit book value basis, please explain, from a financial statement perspective, how all unitholders will begin with the same amount of equity per unit when there is a difference in the price paid by the public in the offering. If the partnership agreement has a different formula for allocating amounts to capital accounts than what is expected to be used for the financial statements immediately post-closing, please explain. If the capital allocation per the partnership agreement and the amount of equity per unit in the financial statements upon initial establishment are in agreement, please provide us with the supporting journal entries you expect to record in conjunction with the contribution and the offering that adjusts all the capital accounts to the same price per unit that the public will pay in the offering.

3. Pro Forma Net Income Per Limited Partner Unit, page F-7

11. We note your response to comment 34 in our letter dated March 7, 2014. If you believe your pro forma distributable cash flow for the twelve months ended December 31, 2013 would have provided you with sufficient available cash to pay the minimum quarterly distribution on *both* your common and subordinated unitholders, please revise to disclose this belief within your assumptions on page F-7. To the extent your pro forma distributable cash flow would have been insufficient to pay the minimum quarterly distribution to both common and subordinated unitholders, please revise your assumptions and calculation of earnings per unit accordingly.

Antero Resources Midstream LLC Predecessor

Notes Accompanying the Financial Statements

Note 4 - Capital Leases, page F-19

12. Please tell us if the amounts presented within note 4 are in thousands of dollars. If another denomination, please revise as necessary.

Note 7 – Commitments and Contingencies, page F-23

13. We note your disclosure regarding transactions with affiliates on page F-18. As you have not included an interest charge on your historical financial statements, please expand on your discussion of your Parent Credit Facility on page F-23 to include an analysis of intercompany accounts as well as the average balance due to or from related parties for each period for which an income statement is required. The analysis of the intercompany accounts has taken the form of a listing of transactions (e.g., the allocation of costs to the subsidiary, intercompany purchases, and cash transfers between entities) for each period for which an income statement was required, reconciled to the intercompany accounts reflected in the balance sheets. Refer to SAB Topic 1.B.1 Question 4.

You may contact Jarrett Torno, Staff Accountant, at (202) 551-3703 or Jim Allegretto, Senior Assistant Chief Accountant, at (202) 551-3849 if you have questions regarding comments on the financial statements and related matters. Please contact Jennifer López, Staff Attorney, at (202) 551-3792, Lilyanna Peyser, Special Counsel at (202) 551-3222 or me at (202) 551-3720 with any other questions.

Sincerely,

/s/ Dietrich A. King for

Mara L. Ransom Assistant Director