



DIVISION OF  
CORPORATION FINANCE

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

May 29, 2014

Via E-mail

Mr. Kyle N. Roane  
Vice President, General Counsel and Corporate Secretary  
Memorial Resource Development Corporation  
1301 McKinney Street, Suite 2100  
Houston, Texas 77010

**Re: Memorial Resource Development Corporation  
Amendment No. 2 to Registration Statement on Form S-1  
Filed May 27, 2014  
File No. 333-195062**

Dear Mr. Roane:

We have reviewed your amendment 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.

Amendment No. 2 to Registration Statement on Form S-1

General

1. We are reviewing your written materials submitted in response to prior comment 1 from our letter to you dated March 5, 2014 and may have further comment.

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Drilling Inventory and Capital Budget, page 10

2. We note that the “Management” locations represent approximately 48% of your Total Gross Horizontal Drilling Locations. In the footnote (2) on page 100 and footnote (1) on page 101, you direct the reader to “Business-Our Operations-Drilling Locations” for more information on how management identified those locations. However, the disclosure in that referenced section provides little detail about how management identified those locations. Please revise your disclosure to provide that information.

Memorial Resource Development LLC (Predecessor)

Notes to Unaudited Condensed Consolidated and Combined Financial Statements, page F-27

Note 15. Subsequent Events, page F-50

3. Please provide us with an analysis under Rule 3-05 of Regulation S-X as it pertains to the pending acquisition of oil and natural gas liquids properties in Wyoming for an aggregate purchase price of \$935 million.

Closing Comments

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company’s disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Svitlana Sweat, Staff Accountant, at (202) 551-3326 or Jennifer O’Brien, Staff Accountant, at (202) 551-3721 if you have questions regarding comments on the financial statements and related matters. You may contact Ronald Winfrey, Petroleum Engineer, at (202) 551-3704 with questions about engineering comments. Please contact Caroline Kim, Attorney-Advisor, at (202) 551-3878 or, in her absence, the undersigned at (202) 551-3740 with any other questions.

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Sincerely,

/s/H. Roger Schwall

H. Roger Schwall  
Assistant Director