



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

DIVISION OF  
CORPORATION FINANCE

June 20, 2014

Via E-mail

Scott McNeill  
Chief Financial Officer  
RSP Permian, Inc.  
3141 Hood Street, Suite 500  
Dallas, Texas 75219

**Re: RSP Permian, Inc.  
Registration Statement on Form S-1  
Filed May 30, 2014  
File No. 333-196388**

Dear Mr. McNeill:

We have limited our review of your registration statement to those issues we have addressed in our 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. Where 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.

Registration Statement on Form S-1

General

1. On your prospectus cover page, please describe the method by which the price is to be determined. Also include this information in your underwriting section. See Instruction 2 to Item 501(b)(3) of Regulation S-K.

Prospectus Summary, page 1

RSP Permian Holdco, L.L.C. Distribution of RSP Permian, Inc. Common Stock, page 12

2. We note your disclosure that RSP Permian Holdco, L.L.C. will distribute shares of your common stock to its members, some of whom will offer all or a portion of the shares distributed to them in this offering. However, this disclosure does not appear to reflect the ownership of RSP Permian Holdco as described in the table at page 132, and accompanying footnotes. For example, Natural Gas Partners IX, L.P. is identified as a selling stockholder, but is not identified as a member of RSP Permian Holdco. Please advise, or revise your disclosure accordingly.

Principal and Selling Stockholders, page 132

3. For Natural Gas Partners IX, L.P., please revise to identify the natural person or persons who exercise sole and/or shared voting or investment control over the securities offered for resale by that shareholder. For guidance, please refer to Compliance and Disclosure Interpretations: Regulation S-K, Question 140.02 at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>.

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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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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.

Please contact Caroline Kim, Attorney-Adviser, at (202) 551-3878 or Laura Nicholson, Attorney-Adviser, at (202) 551-3584 with any questions.

Sincerely,

*/s/ A.N. Parker for*

H. Roger Schwall  
Assistant Director

cc: Douglas E. McWilliams  
Vinson & Elkins L.L.P.