



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

DIVISION OF
CORPORATION FINANCE

November 4, 2013

Via E-mail
Scott McNeill
Chief Financial Officer
RSP Permian, Inc.
3141 Hood Street, Suite 701
Dallas, Texas 75219

**Re: RSP Permian, Inc.
Draft Registration Statement on Form S-1
Submitted October 8, 2013
CIK No. 0001588216**

Dear Mr. McNeill:

We have reviewed your draft 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 providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Draft Registration Statement on Form S-1

General

1. On your prospectus cover page, you state that you qualify as an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act. Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications. Similarly, please supplementally provide us with any research reports about you that are published or distributed in reliance upon Section 2(a)(3) of the Securities Act of 1933 added by Section 105(a) of the Jumpstart Our Business Startups Act by any broker or dealer that is participating or will participate in your offering.

Prospectus Summary, page 1

Our Company, page 2

Identified Drilling Locations(1), page 3

2. Here you enumerate 1750 horizontal and vertical well locations in five different geologic zones and 338 locations to which you attributed proved undeveloped reserves. Please amend your document here and on page 85 to disclose how many of 1750 locations, if any, expire in each of the years 2013-2015; and how many of the 338 PUD locations and associated PUD reserves, if any, that expire prior to scheduled drilling.
3. On page 5, you present “Effective Horizontal Acreage(1)” – the sum of your surface acreages that overlie each of the five different zones. Please amend your document here and on page 87 to disclose the data which you have used to attribute prospectivity to your acreage; e.g. the number of well penetrations, seismic data, well performance, and other data. Include or cross reference your total gross and net surface acres as disclosed on page 99.

Estimated Total Proved Reserves, page 5

4. Please amend your document here and on page 87 to disclose the volumes of oil, natural gas and natural gas liquids that comprise the estimated ultimate recoveries or “EURs” for your 10 horizontal wells - 452 MBOE to 626 MBOE - as well as the average production for June, 2013 - 8,286 BOEPD. This comment applies to all disclosure situations where the differences in product prices could significantly under or overstate the value of equivalent hydrocarbon volume presented, e.g. acquisitions, production rates, EURs.

Spanish Trail Acquisition, page 9

5. You state that you issued net profits interests or “NPIs” in your properties to ACTOIL. Please expand this to disclose whether these NPI reserves are included in your disclosed proved reserves estimates for year-end 2012 and June 30, 2013. If true, please support your claim to these reserves.

Emerging Growth Company, page 13

6. We note your disclosure that you “will” irrevocably opt out of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act. Please revise to more clearly state your election under Section 107(b) of the JOBS Act. Please refer to Question 13 of the Jumpstart Our Business Startups Act Frequently Asked Questions, available at: <http://www.sec.gov/divisions/corpfin/guidance/cfjjobsactfaq-title-i-general.htm>.

Risk Factors, page 24

Reserve estimates depend on many assumptions that may turn out to be inaccurate..., page 29

7. You state “[i]n addition, we may adjust reserve estimates to reflect production history, results of exploration and development, existing commodity prices and other factors, many of which are beyond our control.” Please amend your document to discuss risks associated with those reserve estimation items over which you have control, e.g. (initial) hydrocarbons in place, recovery efficiencies, initial production rates, production decline rates.

Business, page 84

Summary of Pro Forma Oil and Natural Gas Reserves, page 96

8. Please amend your document to explain the changes between your pro forma proved reserves effective December 31, 2012 and those effective June 30, 2013 due to each of revisions, acquisitions, divestitures, extensions/discoveries, improved recovery and production.

Pro Forma PUDs, page 97

9. Please expand your discussion here to disclose the figures for the PUD reserves you divested in 2012 and in the six months ending June 30, 2013.
10. The incurred capital costs for the development of your PUD reserves appear to be about \$57/BOE (= \$62 million/1,089 MBOE) for the six months ending June 30, 2013. Projected unit development costs appear to be \$20/BOE or less for the year ending December 31, 2012 reserve estimates (from the standardized measure, pages F-67, F-74 and F-80). The projected unit total costs (production, ad valorem taxes and capital) for the summed PUD reserve estimates from the four June 30, 2013 third party reports appear to be about \$32/BOE. Please explain the differences between the historical and projected costs and address whether these higher costs indicate a trend.

Average costs (per MBoe):, page 98

11. Please explain to us how oil and gas transportation costs are incorporated in your historical and projected – in your standardized measure - production costs and/or 12 months’ average product prices. Be advised that in our view, transportation costs should be reflected in either the prices you are paid or the costs you incur.

Management, page 113

12. For each director, briefly discuss the specific experience, qualifications, attributes or skills that led to the conclusion that the person should serve as a director, in light of your business and structure. See Item 401(e) of Regulation S-K.

Outstanding Equity Awards at 2012 Fiscal Year-End, page 117

13. Please disclose the material terms of the incentive units and profits interests. For example, please disclose the “fundamental change” transactions upon which vesting will be fully accelerated.

Principal and Selling Stockholders, page 124

14. Clarify which of the shareholders listed under “Selling Stockholders and Other 5% Stockholders” the selling stockholders. Also, indicate the natural person who is the beneficial owner - i.e. having voting or investment power – of the shares held by non-persons. See Item 507 of Regulation S-K.

Index to Financial Statements, page F-1

Unaudited Pro Forma Combined Financial Statements, page F-2

Introduction, page F-2

15. Please revise the introductory language regarding your pro forma financial statements to include a statement that your pro forma statements of operations are not indicative of your operations going forward because they necessarily exclude various operating expenses.
16. Please clarify for us the difference between the “Rising Star Excluded Assets” column on page F-4 with the “Rising Star DevCo Excluded Assets” column on pages F-5 and F-6.

Notes to Unaudited Pro Forma Combined Financial Statements, page F-7

Note 3 – Supplemental Disclosure of Oil and Natural Gas Operations, page F-16

17. We note that you have made reference to pro forma oil and natural gas reserve information. However, it appears the historical pro forma supplemental oil and natural gas reserve disclosure has been omitted. Please furnish the supplementary disclosures described in FASB ASC 932-235-50-3 through 50-11 as part of your pro forma financial statements.

Standardized Measure of Discounted Future Net Cash Flows, page F-16

18. For consistency, please revise the table on page F-17 so that the columns, viewed from left to right, are in the same order as those presented for the pro forma financial statements. For example, we note the column for “Rising Star Excluded Assets” is positioned directly after the column labeled “Historical Predecessor” in the pro forma financial statement on page F-4.
19. As you will no longer be a tax exempt entity upon the completion of your offering, please add a footnote to the calculation of the standardized measure of discounted future net cash flows on a pro forma basis to disclose the amount of future income tax expense that would have been included as of December 31, 2012 if you were not a tax exempt entity.

Predecessor Financial Statements

Unaudited Historical Combined Financial Statements

Combined Balance Sheets, page F-22

20. The line item titled “Deferred revenue” appears to represent the proceeds earned by ACTOIL, LLC from the properties sold in December 2012 and March 2013. Please tell us why you believe the characterization of this line item as deferred revenue is appropriate. With your response, please tell us why the cash recorded in connection with this transaction is presented as part of cash flows from financing activities in your statement of cash flows.

Combined Statements of Operations, page F-23

21. We note you present “Gain on sale of assets” as a component of “Other Income (Expense).” It appears that this amount should be presented as part of operating income. Please revise. Refer to FASB ASC 360-10-45-5.

Notes to Unaudited Combined Financial Statements

Note 5 – Credit Agreement, page F-36

22. Please revise your disclosure stating that the Revolving Credit Facility had an outstanding balance of approximately \$25 million and \$110 million as of June 30, 2013 and December 31, 2012 to more accurately indicate the amounts shown on the combined balance sheets (i.e., \$27 million and \$111.6 million, respectively).

Note 9 – Members’ Equity, page F-41

23. We note that incentive units were issued as part of the RSP LLC Agreement. Please tell us about the performance, market, and service conditions associated with these awards. In addition, please explain your statement that these incentive units were deemed immaterial to the historical financial statements. Refer to FASB ASC 718-10-25.
24. We note the disclosure per page 65 of your submission stating that the holders of incentive units may be entitled to a portion of the proceeds to be received upon the sale of shares of your common stock. Please tell us whether the consummation of your planned offering would fulfill this condition. If so, please disclose the amount of compensation expense that will be recognized and any amounts that will be deferred along with the period over which the deferred expense will be recognized.

Note 10 – Commitments and Contingencies, page F-42

25. We note your representation stating: “Management believes it is remote that the impact of such matters will have an adverse effect on the Predecessor’s financial position or results of operations.” Please expand your disclosure to provide management’s conclusion with regard to the potential impact on the Predecessor’s cash flows.

Historical Combined Financial Statements

26. Please consider the impact of the above comments on your annual financial statements.

Combined Statements of Cash Flows, page F-48

27. We note that you classify cash payments on settled derivatives as part of cash flows from operating activities and net premiums paid for put options as part of cash flows from investing activities. Please provide us with an explanation for your policy regarding the classification of these cash flows. Refer to FASB ASC 230-10-45. With your response, please tell us what has been netted with the premiums paid.

Notes to Combined Financial Statements

Note 11 – Supplemental Disclosure of Oil and Natural Gas Operations, page F-65

28. It does not appear that the disclosure of 1) capitalized costs relating to oil- and gas-producing activities, 2) costs incurred for property acquisition, exploration, and development activities, and 3) results of operations for oil- and gas-producing activities have been provided. Please revise to provide all of the disclosure required by FASB ASC 932-235-50.

29. Here you state “[t]he Predecessor’s proved oil and natural gas reserves as of December 31, 2012 and 2011 were prepared internally by management and not by independent third party petroleum consultants.” On page F-66, you state “[f]or the year ended December 31, 2012, the Predecessor’s negative revision of 24,608 MBoe - which was 50% of proved reserves at January 1, 2012- of previous estimated quantities is primarily due to the change from internally prepared reserves reports to third party prepared reserves reports. Changes that occurred along with contracting a third party reserve engineer included: wells switching from vertical to horizontal and the recognition of three stream vs. two stream.” Please explain this inconsistency and amend your document to account for the large negative revisions. This comment also applies to the 2012 proved reserves reconciliations on page F-73 (“Spanish Trail”) and the 2012 proved reserve reconciliation on page F-79 (“Contributed Properties”).

Exhibits

General

30. Please file all agreements required to be filed by Item 601(b)(10) of Regulation S-K. As examples, please file the RSP LLC Agreement, and the agreements effecting the transactions described under the heading “Corporate Formation Transactions” beginning on page 9.

Exhibits 99.1, 99.2, 99.4

31. You have not disclosed unproved reserves in your document. However three of your third party reserve report present estimated probable reserves figures. Please file third party reports which do not include unproved reserves information or provide that information in your registration statement. We remind that, if you choose to include such numbers, they must comply with Rule 3-10(a)(18) of Regulation S-X.

If you intend to respond to these comments with an amended draft registration statement, please submit it and any associated correspondence in accordance with the guidance we provide in the Division’s October 11, 2012 announcement on the SEC website at <http://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm>.

Please keep in mind that we may publicly post filing review correspondence in accordance with our December 1, 2011 policy (<http://www.sec.gov/divisions/corpfin/cfannouncements/edgarcorrespondence.htm>). If you intend to use Rule 83 (17 CFR 200.83) to request confidential treatment of information in the correspondence you submit on EDGAR, please properly mark that information in each of your confidential submissions to us so we do not repeat or refer to that information in our comment letters to you.

Scott McNeill
RSP Permian, Inc.
November 4, 2013
Page 8

You may contact Jennifer O'Brien, Staff Accountant, at (202) 551-3721 or Ethan Horowitz, Accounting Branch Chief, at (202) 551-3311 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-Adviser, at (202) 551-3878 or Laura Nicholson, Attorney-Adviser, at (202) 551-33584 with any other questions.

Sincerely,

/s/H. Roger Schwall

H. Roger Schwall
Assistant Director

cc: Douglas E. McWilliams
Vinson & Elkins LLP