



DIVISION OF
CORPORATION FINANCE

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

December 29, 2010

Via U.S. Mail and Facsimile

Daniel Churay, President and CEO
Rex Energy Corporation
476 Rolling Ridge Drive, Suite 300
State College, PA 16801
(814) 278-7286

**Re: Rex Energy Corporation
Annual Report on Form 10-K
Filed March 3, 2010
File No. 001-33610
Definitive Proxy Statement on Form 14A
Filed April 30, 2010
File No. 001-33610**

Dear Mr. Churay:

We have reviewed your filing 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 within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. 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 filing and the information you provide in response to these comments, we may have additional comments.

Annual Report on Form 10-K for Fiscal Year Ended December 31, 2009

Business, page 5

Production, Revenues and Price History, page 10

1. We note your presentation of average sales price per unit of oil and gas production by geographical area. Please expand your tabular presentation to add your average production cost, not including ad valorem and severance taxes, per unit of production by geographical area, to comply with Item 1204(b)(2) of Regulation S-K.

Marketing and Customers, page 11

2. We note your disclosure indicating a letter agreement between you and CountryMark Cooperative, LLP regarding crude oil purchases, which was replaced by the Master Crude Purchase Agreement effective January 1, 2010. Tell us whether you had any delivery commitments at December 31, 2009 with CountryMark or with any other party that would require disclosures pursuant to Item 1207 of Regulation S-K.

Properties, page 32

3. Please revise to specify the reliable technologies used to estimate your proved reserves in response to Item 1202(a)(6) of Regulation S-K.
4. We note your statement that “an internal staff of petroleum engineers and geosciences professionals” oversees the preparation of the reserves estimates and audit. Disclose the qualifications of your internal staff in response to Item 1204(a)(7) of Regulation S-K.

Financial Statements

Note 3 – Business and Oil and Gas Property Acquisitions, page 84

5. We note your disclosure indicating that in the second quarter of 2009, you entered into a Participation and Exploration Agreement with Williams Production Company, LLC and Williams Production Appalachia, LLC (collectively, Williams), pursuant to which Williams will need to invest \$41 million for its 50% share of the wells and \$33 million on your behalf in well drilling and completion costs before it can acquire a 50% interest in your Project Area. Tell us how you plan to account for this \$33 million amount.

Note 18 – Oil and Natural Gas Reserve Quantities (Unaudited), pages 112-113

6. We note from your summary of changes in estimated reserves of your oil and natural gas wells that you had significant revisions of previous reserve estimates. Please expand your disclosure to explain the reasons for your significant revisions for all periods presented to comply with FASB ASC paragraph 932-235-50-5.

Definitive Proxy Statement filed April 30, 2010

General

7. Please confirm in writing that you will comply with the following comments in all future filings. Provide us also with an example of the disclosure you intend to use. Please understand that after our review of your responses, we may raise additional comments.

8. We note that you have not included any disclosure in response to Item 402(s) of Regulation S-K. Please advise us of the basis for your conclusion that disclosure in response to this item is unnecessary and describe the process you undertook to reach that conclusion.

Compensation Discussion and Analysis, page 17

2009 Compensation Program, page 21

Long Term Incentive Compensation, page 24

9. We note your statements with respect to the Compensation Committee's decision to grant restricted stock to the executive officers for 2009. Please revise to explain the basis for this determination, as we note that the committee granted stock appreciation rights instead of restricted stock for 2008. Refer to Item 402(b)(1)(iv) of Regulation S-K.

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 Exchange Act of 1934 and all applicable Exchange 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.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Paul Monsour at (202) 551-3360 or Lily Dang at (202) 551-3867 if you have questions regarding comments on the financial statements and related matters. Please contact Caroline Kim at (202) 551-3878 or, in her absence, Anne Nguyen Parker, Branch Chief, at (202) 551-3611 with any other questions.

Sincerely,

/s/ Anne Nguyen Parker for
H. Roger Schwall
Assistant Director