



DIVISION OF
CORPORATION FINANCE

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

December 30, 2011

Via E-mail

Randy L. Limbacher
Chief Executive Officer
Rosetta Resources Inc.
717 Texas Street
Suite 2800
Houston, TX 77002

**Re: Rosetta Resources Inc.
Form 10-K for Fiscal Year Ended December 31, 2010
Filed February 25, 2011
File No. 000-51801**

Dear Mr. Limbacher:

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.

Form 10-K for Fiscal Year Ended December 31, 2010

Item 1A. Risk Factors, page 14

Operating hazards, natural disasters or other interruptions of our operations could result in potential liabilities, which may not be fully covered by our insurance, page 19

1. We note your disclosure in the above-captioned risk factor concerning operational and financial risks arising from operating hazards, and your disclosure on pages 18 and 19 regarding regulatory risks related to hydraulic fracturing. If material, please revise the above-captioned risk factor to address operational and financial risks associated with

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hydraulic fracturing, such as underground migration and surface spillage or mishandling of fluids, including chemical additives.

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.

Please contact Paul Monsour, Staff Attorney, at (202) 551-3360, Laura Nicholson, Staff Attorney, at (202) 551-3584, or me at (202) 551-3740 with any questions.

Sincerely,

/s/ A.N. Parker for

H. Roger Schwall
Assistant Director