



DIVISION OF
CORPORATION FINANCE
MAIL STOP 7010

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

May 3, 2007

Mr. Mike Ulrich
Vice President and Trust Officer
The Bank of New York Trust Company, N.A., Trustee
919 Congress Avenue
Austin, TX 78701

Re: Mesa Offshore Trust
Form 10-K for the Fiscal Year Ended December 31, 2006
Filed April 17, 2007
File No. 001-08432

Dear Mr. Ulrich:

We have reviewed your Form 10-K for the Fiscal Year Ended December 31, 2006, and have the following comments. We have limited our review of your filing to those issues we have addressed in our comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended December 31, 2006

Business, page 4

Description of Royalty Properties, page 14

1. We note that you included an appraisal report on the proved reserves for the underlying royalty properties that was prepared by DeGolyer and MacNaughton under this heading, and have not otherwise provided the disclosures required under Item 102 of Regulation S-K and Industry Guide 2.

Please revise your disclosure to provide comprehensive tabular and narrative disclosure of all of your estimated reserves and related estimates of future cash flows, in addition to other pertinent information specified within the guidance cited above for all of your properties. While you are required to identify any independent consultants that you refer to as having prepared or reviewed the reserve estimates you disclose, you are responsible for preparing the disclosures that appear in the filing.

Any supporting reserve reports that you wish to include should be attached as exhibits, rather than being included within the text of the report.

2. The appraisal report reflects that it was signed on April 10, 2006, which precedes the date as of which the underlying reserves were appraised. Please correct the date, or explain to us how such reserves were projected forward to December 31, 2006.
3. You indicate on page 24 that the future general and administrative costs and expenses of the Trust are expected to approximate \$1,200,000 annually. However, a similar disclosure in Note 6 to the financial statements on page 47 indicates such costs and expenses will approximate \$500,000 per year. Please revise your disclosures to eliminate this inconsistency, and reflect the appropriate amount.

Financial Statements and Supplementary Data, page 39

Note 3 – Basis of Accounting, page 45

4. You disclose that for 2004, “operating and capital costs incurred exceeded proceeds from oil and gas sales; accordingly, no Royalty income was reported.” However, in the table on page 35, you disclose that proceeds exceeded operating and capital costs by \$637,742. Please reconcile this discrepancy, and revise your disclosures accordingly.

Exhibit 31

5. We note that the trustee identified in paragraph 1 of your certification, JPMorgan Chase Bank, N.A., does not correspond to the trustee indicated below your signature, The Bank of New York Trust Company, N.A. Please amend your filing to correct this inconsistency. Additionally, ensure that the current trustee is correspondingly reflected throughout your filing.

Mr. Mike Ulrich
The Bank of New York Trust Company, N.A., Trustee
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Closing Comments

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our 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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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 connection with responding to our comments, please provide, in writing, a 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Donald F. Delaney, at (202) 551-3863, if you have questions regarding comments on the financial statements and related matters. Please contact me, at (202) 551-3686, with any other questions.

Sincerely,

Karl Hiller
Branch Chief