



DIVISION OF  
CORPORATION FINANCE  
MAIL STOP 7010

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

June 14, 2007

Mr. Steven D. Foster  
Chief Financial Officer  
Parallel Petroleum Corporation  
1004 N. Big Spring, Suite 400  
Midland, Texas 79701

**Re: Parallel Petroleum Corporation  
Form 10-K for Fiscal Year Ended December 31, 2006  
Filed February 28, 2007  
Form 10-Q for Fiscal Quarter Ended March 31, 2007  
Filed May 9, 2007  
Response Letters Dated May 2, 2007 and May 24, 2007  
File No. 000-13305**

Dear Mr. Foster:

We have reviewed your filings and response letters and have the following comments. We have limited our review of your filings to those issues we have addressed in our comments. Please provide a written response to our comments. 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.

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

Supplemental Oil and Natural Gas Reserve Data, page F-29

1. We have read your response to comment two of our letter dated May 14, 2007, concerning the undrilled units factored into your reserve determinations. Although you have provided a comparison of the differences to the financial measures between your current booking practice in the Wolfcamp field and limiting proved undeveloped locations to two parallel offset wells to a productive horizontal well, you did not provide the difference in proved reserve volumes. Please provide this comparison. Normally, continuity of production for wells offsetting a productive well by more than one location away should be demonstrated by pressure communication. Geological presentations of isopach maps and cross-sections are not sufficient to demonstrate continuity of

- production. We understand that you do not consider the differences to be material, and will further consider the information you provide in response to this comment. However, as other revisions are necessary, please limit your PUD reserves to only wells that are direct parallel offset wells to a productive horizontal well unless you have also demonstrated productive continuity through pressure communication.
2. We have read your response to comment three of our letter dated May 24, 2007, including the additional information you propose to disclose about your principal properties. To the extent that a field's dominant production and reserves are not oil, such as the Barnett Shale and Wolfcamp, please further modify your disclosure to report its production and reserves in equivalent gas reserves in a clarifying footnote or tabulation.
  3. We have read your response to comment five of our letter dated May 24, 2007, describing the support you have for booking the waterflood reserves in the Carm-Ann field. It appears that the Scott Hickman report is more of a feasibility report than a report which clearly has evaluated the Carm-Ann field's reservoir characteristics and estimated waterflood reserves by traditional waterflood technical analysis. Although he calculates a vertical conformance, it does not appear to be utilized in any reserve calculation. Also, key parameters such as current gas saturation, gravity effects, fluid properties and an evaluation of three major reservoir layers and how they may or may not respond to water injection does not appear to have been considered. There is no explanation on how the projected oil rates over time were estimated except for a back-calculation to enable the wells to recover their "assigned" ultimate reserves. Therefore, it appears that the secondary reserve estimates for this field should not have been classified as proved for the last three years. Until such time that a pilot project is implemented and secondary recovery demonstrated, it appears these reserves should be classified as probable. Alternatively, provide us with a more complete and up to date waterflood evaluation by Cawley Gillette or the company.

#### Closing Comments

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

You may contact Lily Dang at (202) 551-3867 if you have questions regarding comments on the financial statements and related matters. You may contact James

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Murphy, Petroleum Engineer at (202) 551-3703 with questions about engineering comments. Please contact me at (202) 551-3686 with any other questions.

Sincerely,

Karl Hiller  
Branch Chief

cc: Mr. Thomas W. Ortloff – Legal Counsel