



DIVISION OF
CORPORATION FINANCE
Mail Stop 7010

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

April 18, 2008

By U.S. Mail and facsimile

Mr. John R. Irwin
President and Chief Executive Officer
Atwood Oceanics Inc.
15835 Park Ten Place Drive
Houston, Texas 77084

**Re: Atwood Oceanics Inc.
Form 10-K for fiscal year ended September 30, 2007
Filed November 29, 2007**

**Form 10-Q for fiscal quarter ended December 31, 2007
Filed February 8, 2008**

**Schedule 14A
Filed January 14, 2008**

File No. 1-13167

Supplemental Response filed March 24, 2008

Dear Mr. Irwin:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your documents 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.

Schedule 14A

1. Please confirm in writing that you will comply with the following comments on your Schedule 14A 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.

Compensation Discussion and Analysis

2. We note your response to our prior comment 3 and reissue it in part. Please put your response to our comment in the third bullet regarding the failure to meet safety goals into the proxy statement and state by how much this impacted each of Mr. Smith's and Mr. Irwin's bonus.

In regard to your response to our fourth bullet of our prior comment 3, provide an analysis for each named executive officer of the reasons that each was awarded the amount of salary increase, stock options, restricted stock and annual bonus, including how each one met the subject performance factors you discuss. Specify why the multipliers for the bonuses were set between 1.8% and 1.25 % of salary.

Potential Payments Upon Termination or Change of Control

3. We note your response to our prior comment 4 and reissue it in part. Describe the basis upon which you determined to pay the amounts due upon a change of control, for example whether it was by comparison to amounts paid by competitors or through market surveys. In addition, state whether the benefits payable under the agreements influence decisions regarding other compensation elements for the executives.

Form 10-Q for fiscal quarter ended December 31, 2007

Exhibits 31.1, 31.2, 32.1 and 32.2

4. Each of these exhibits is dated as of February 8, 2007. Please revise and re-file these exhibits as of a current date.

Closing Comments

As appropriate, please 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

Mr. John R. Irwin
Atwood Oceanics Inc.
April 18, 2008
Page 3

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 Donna Levy at (202) 551-3292 or me at (202) 551-3611 with any questions.

Sincerely,

Anne Nguyen Parker
Branch Chief

cc: W. Garney Griggs, Esq.
Donna Levy