



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 4628

March 9, 2017

Via Email

Mr. Robert J. Saltiel  
President and Chief Executive Officer  
Atwood Oceanics, Inc.  
15011 Katy Freeway, Suite 800  
Houston, TX 77094

**Re: Atwood Oceanics, Inc.  
Form 10-K for the Fiscal Year ended September 30, 2016  
Filed November 15, 2016  
File No. 001-13167**

Dear Mr. Saltiel:

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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Form 10-K for the fiscal year ended September 30, 2016

Financial Statements and Supplementary Data, page 45

Notes to Consolidated Financial Statements, page 52

Note 3 – Property and Equipment, page 57

Impairments

1. Provide us, as supplemental information, reasonably detailed summaries of the impairment testing performed at September 30, 2016. The summaries should show the carrying values and estimated cash flows of each asset tested for impairment. For each summary, tell us the values used for each of the significant assumptions identified in your footnote, and explain, in reasonable detail, the basis for each assumed value.

Mr. Robert J. Sattiel  
Atwood Oceanics, Inc.  
March 9, 2017  
Page 2

2. Explain to us how the assumptions used in your impairment testing performed at September 30, 2016 compare to corresponding assumptions used in developing other information used by you for comparable periods, such as internal budgets and projections, accruals related to incentive compensation plans, or information communicated to others. See FASB ASC paragraph 360-10-35-30.
3. For each of the assets tested for impairment at September 30, 2016, tell us the date of the most recent prior impairment test. Additionally, tell to us how the assumptions used in the impairment testing performed at September 30, 2016 compare to corresponding assumptions used in the most recent prior impairment test.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

You may contact Joseph Klinko at (202) 551-3824 or me at (202) 551-3489 with any questions.

Sincerely,

/s/ Brad Skinner

Brad Skinner  
Senior Assistant Chief Accountant  
Office of Natural Resources