



DIVISION OF
CORPORATION FINANCE

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

June 21, 2013

Via E-mail

Robert C. Reeves
President and Chief Executive Officer
Athlon Energy Inc.
420 Throckmorton Street, Suite 1200
Fort Worth, Texas 76102

**Re: Athlon Energy Inc.
Registration Statement on Form S-1
Filed June 5, 2013
File No. 333-189109**

Dear Mr. Reeves:

We have reviewed your registration statement 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 by amending your registration statement and providing the requested information. 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 registration statement and the information you provide in response to these comments, we may have additional comments.

Registration Statement on Form S-1

Non-GAAP Financial Measures, page 14

1. We note that your definition of adjusted EBITDA references that mark-to-market losses on derivative contracts are added to and mark-to-market gains on derivative contracts are subtracted from net income. We further note that your reconciliation of net income to adjusted EBITDA reflects an adjustment referenced as non-cash derivative loss (gain). Please clarify if the sum of mark-to-market losses and gains totals amounts related to non-cash derivative loss (gain) for all periods presented. Lastly, please tell us and disclose how you define and calculate non-cash derivative loss (gain).

Underwriting, page 146

2. You state that the underwriters' obligations to purchase the shares in this offering are subject "to other conditions." Please expand to disclose any other material conditions.
3. Please explain the material terms underlying the underwriters' discretion of changing the offering price and other selling terms. In that regard, we the following statement (emphasis added): "If all the shares are not sold at the initial offering price, the underwriters may change the offering price and the other selling terms."

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 Act of 1933 and all applicable Securities 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Jenifer Gallagher, Staff Accountant, at (202) 551-3706 or John Cannarella, Staff Accountant, at (202) 551-3337 if you have questions regarding comments on the financial statements and related matters. You may contact Ronald Winfrey, Petroleum

Mr. Robert C. Reeves
Athlon Energy Inc.
June 21, 2013
Page 3

Engineer, at (202) 551-3704 with questions about engineering comments. Please contact Caroline Kim, Staff Attorney, at (202) 551-3878 or, in her absence, the undersigned at (202) 551-3611 with any other questions.

Sincerely,

/s/ A.N. Parker

Anne Nguyen Parker
Branch Chief

CC: Sean T. Wheeler
Latham & Watkins LLP