



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-4628

October 2, 2009

Mr. Michael A. Gerlich  
Vice President and Chief Financial Officer  
Gastar Exploration Ltd.  
1331 Lamar Street, Suite 1080  
Houston, TX 77010

**Re: Gastar Exploration Ltd.**  
**Form 10-K for the Fiscal Year Ended December 31, 2008**  
**Filed March 16, 2009**  
**File No. 1-32714**

Dear Mr. Gerlich:

We have reviewed your response letter and have the following 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, 2008

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1. We note your response to our prior comment two, including the fact that you did not address the agreements with Enserco. Please file all material agreements with ETC and Enserco, pursuant to Item 601(b)(10) of Regulation S-K.
2. With regard to the contracts with ETC, we note from the disclosure at page 26 that in 2008 ETC accounted for “substantially all of our revenues from [the Hilltop area].” At page 48, you disclose that the agreements with ETC have a term of 10 years, which suggests that they would be more significant to you than shorter term agreements might otherwise be. Although your response indicates that such terms “would be available with other natural gas gathering, treatment and transportation companies operating in the Hilltop area,” your risk factor makes clear that “There are a limited number of natural gas transporters in the Hilltop area.” Also, your response refers to a singular contract, but the disclosure at page 48 refers to “formal agreements” with ETC. Please explain the apparent inconsistency.

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

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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.

Please contact Sean Donahue at (202) 551-3579, Timothy Levenberg, Special Counsel at (202) 551-3707, or me at (202) 551-3745 with any questions.

Sincerely,

H. Roger Schwall  
Assistant Director