



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 7010

September 24, 2007

Via U.S. Mail and Fax (713) 739-0458

Mr. Michael Gerlich
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, 2006
Filed March 27, 2007
File No. 1-32714**

Dear Mr. Gerlich:

We have reviewed your supplemental response letter dated September 5, 2007 as well as the above referenced filings and have the following comments. As noted in our comment letter dated August 7, 2007, we have limited our review to your financial statements and related disclosures and do not intend to expand our review to other portions of your documents.

Form 10-Q for the period ended June 30, 2007

Note 3. Property and Equipment, page 6

1. We note that in the three months ended June 30, 2007, you had a Gain on sale of unproved natural gas and oil properties of \$38.9 million. As indicated in Rule 4-10(c)(6)(i) of Regulation S-X, generally, sales should not result in any gain or loss. Please revise your disclosure to provide more detail regarding the transaction which results in the gain. In your response, please address whether the sale of undeveloped property accounted for more than 25% of reserve quantities within its respective cost center.

Mr. Michael Gerlich
Gastar Exploration Ltd
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Please respond to this comment 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. Detail letters greatly facilitate our review. Please file your response letter via EDGAR. You may contact Bob Carroll, Staff Accountant, at (202) 551-3362 or Shannon Buskirk at (202) 551-3717 if you have questions regarding comments on the financial statements and related matters.

Sincerely,

/s/ Brad Skinner

Brad Skinner
Senior Assistant Chief Accountant