



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

September 10, 2009

Mr. Ben Brigham  
President and Chief Executive Officer  
Brigham Exploration Company  
6300 Bridge Point Parkway, Building Two, Suite 500  
Austin, TX 78730

**Re: Brigham Exploration Company  
Registration Statement on Form S-3  
File No. 333-161455  
Filed August 20, 2009**

Dear Mr. Brigham:

We have limited our review of your filing to the issues we have addressed in our comments. Where indicated, we think you should revise your document in response to the comments. If you disagree, we will consider your explanation as to why our comments are inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. 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.

General

Calculation of Registration Fee

1. Please revise your filing to clarify whether the securities underlying the rights are covered by your registration statement.
2. We note that the warrants may represent rights to purchase "equity securities issued by an unaffiliated corporation or other entity and held by the registrant." It appears that such an issuance would involve the offer and sale of a separate

security that is not being registered. Please explain how the distribution of those third-party securities will be effected in compliance with the registration requirements of the Securities Act.

Description of Rights, page 21

3. You state that you may issue rights to purchase debt securities, preferred stock, common stock or "other securities." Please clarify the nature of such "other securities."

Exhibit 5.1

4. Please obtain and file a revised legality opinion that states, if true, that the depositary shares will be legal, binding obligations of the company.
5. The revised opinion should not suggest that counsel is not qualified to opine on the relevant laws. In this regard, we note that counsel has stated that they are not members of the bar of the States of Delaware or Nevada. We also note the assumption that the laws of the State of Nevada are identical to the laws of the State of Texas. Please obtain and file a revised opinion that does not suggest that counsel is not qualified to opine on the relevant laws. In the alternative, obtain and file opinions from counsel qualified to practice in such jurisdictions.
6. We also note the statement that counsel's knowledge of the General Corporation Law of the State of Delaware and the Delaware Revised Uniform Limited Partnership Act is derived from reading those statutes without consideration of any judicial or administrative interpretations thereof. The new or revised opinion(s) should not be limited to only statutory law.

Closing Comments

Please amend your registration statement in response to these comments. 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 supplemental 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 filings reviewed by the staff to be certain that they have provided all information investors require for an informed 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.

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Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, 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 this action 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 connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a 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. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of an amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

Please contact Douglas Brown at (202) 551-3265 or, in his absence, Laura Nicholson at (202) 551-3584 with any questions.

Sincerely,

H. Roger Schwall  
Assistant Director

cc: Kari Potts  
(512) 482-5055