



DIVISION OF
CORPORATION FINANCE
MAIL STOP 7010

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
100 F Street, NE
WASHINGTON, D.C. 20549-7010

January 26, 2006

Mr. Eugene B. Shepherd, Jr.
Chief Financial Officer
Brigham Exploration Company
6300 Bridge Point Parkway, Building 2, Suite 500
Austin, Texas 78730

Re: Brigham Exploration Company
Form 10-K for Fiscal Year Ended December 31, 2004
Filed March 31, 2005
File No. 0-22433

Dear Mr. Shepherd:

We have completed our review of your Form 10-K and related filings and do not, at this time, have any further comments.

Sincerely,

Jill S. Davis
Branch Chief