



DIVISION OF
CORPORATION FINANCE
MAIL STOP 7010

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

April 20, 2007

Mr. David Flake
Treasurer and Chief Financial Officer
Basic Earth Science Systems, Inc.
1801 Broadway, Suite 620
Denver, CO 80202-3835

Re: Basic Earth Science Systems, Inc.
Form 10-KSB for the Fiscal Year Ended March 31, 2006
Filed July 14, 2006
Form 10-QSB for the Quarterly Period Ended December 31, 2006
Filed February 15, 2007
Response letter dated March 14, 2007
File No. 000-07914

Dear Mr. Flake:

We have reviewed your response letter and filings and have the following comments. We have limited our review of your filing to those issues we have addressed in our comments. Please provide a written response to our comments. Please be as detailed as necessary in your explanation. After reviewing your response, we may raise additional comments.

General

1. Please provide a written response regarding the accuracy and adequacy of your disclosures as requested at the end of this letter.

Form 10-QSB for the Quarterly Period Ended December 31, 2006

Management's Discussion and Analysis and Plan of Operation, page 8

EBITDA, page 8

2. In your response to comment four from our letter dated February 22, 2007, you explain that you believe it is necessary to include EBITDA within your filing because it is a useful performance measure utilized by several users of your financial information for comparing profitability trends between companies and industries. Please tell us why you believe users of your financial information

would be unable to calculate such amounts on their own, using financial information included in the documents calculated in accordance with GAAP.

3. Your response to comment five from our letter dated February 22, 2007 also explains that the measure of EBITDA provides management additional information about your ability to meet future requirements for debt service, capital expenditures and working capital. These items appear to relate more to your liquidity position rather than your performance, which is inconsistent with your response to comment four, in which you explain that you believe it is necessary to provide the measure of EBITDA because it is a useful performance measure. Please reconcile these statements.

Closing Comments

Please respond to these comments 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. Detailed letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your 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 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.

Mr. David Flake
Basic Earth Science Systems, Inc.
April 20, 2007
Page 3

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.

You may contact Mark Wojciechowski at (202) 551-3759, or in his absence, Kimberly Calder, Assistant Chief Accountant, at (202) 551-3701 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3683 with any other questions.

Sincerely,

Jill Davis
Branch Chief