



DIVISION OF
CORPORATION FINANCE
MAIL STOP 7010

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

January 10, 2008

Mr. Larry F. Vance
Chairman of the Board and Chief Executive Officer
Earth Search Sciences, Inc.
306 Stoner Loop Road, #6
Lakeside, MT 59922

RE: **Earth Search Sciences, Inc.**
 Form 10-KSB for the Fiscal Year Ended March 31, 2007
 Filed July 16, 2007
 Form 10-KSB for the Fiscal Year Ended March 31, 2006
 Filed July 17, 2006
 Form 10-QSB for the Fiscal Quarter Ended June 30, 2007
 Filed August 20, 2007
 Form 10-QSB for the Fiscal Quarter Ended September 30, 2006
 Filed November 20, 2006
 Response Letter Dated December 18, 2007
 File No. 000-19566

Dear Mr. Vance:

We have reviewed your Form 10-KSBs for each of the Fiscal Years Ended March 31, 2007 and 2006, Form 10-QSBs for the Fiscal Quarters Ended June 30, 2007 and September 30, 2006, and response letter dated December 18, 2007, and have the following additional comments. We have limited our review of your filings to those issues we have addressed in our comments. Where indicated, we think you should revise your documents 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.

Form 10-KSB/A1 (draft) for the Fiscal Year Ended March 31, 2007

Legal Proceedings, page 9

1. We have read your response to prior comment 2, and reviewed the original capital lease and settlement agreements you provided. We note that you were required to return the probe to the lessor on or before August 31, 2005, as stipulated in Section 3.1 of the Settlement Agreement and Mutual Release. And although you state in your response that the agreement “provided for a new obligation upon failure to return the probe,” we observe that Section 3.4.1 of the agreement states that in the event of your failure to turn over custody of and physically deliver the probe to the lessor by such date, the rent obligation under the original lease “shall automatically be reinstated.”

Accordingly, it appears that the settlement amount was contingent on performance (i.e. your return of the probe). And since you did not comply with the terms of the agreement, the original lease terms were reinstated. Therefore, we see no basis for recalculating a lower liability as of March 31, 2006, and consequently no basis for your gain recognition.

Unless you are able to show how your recalculated liability is consistent with the provisions in Section 3.4.1 of the Settlement Agreement and Mutual Release, you will need to amend your financial statements to correct your accounting.

2. On a related point, we see that you disclose under the Litigation Note on page 7 of your Form 10-QSB for the quarter ended June 30, 2007, that you returned the Probe in January 2007, but have been unable to reach a final settlement. You state that you “continue to accrue interest, rents and late fees under the 2005 Settlement Agreement,” which has resulted in an accrual of \$6,363,800 as of June 30, 2007. Please adjust this disclosure, as necessary, to coincide with any revisions to your accounting, and ensure that you have comparable disclosure in your Form 10-KSB for the year ended March 31, 2007, and all subsequent interim reports. Also, expand the disclosure to explain how continuing to accrue rents after the probe has been returned, as indicated in your present disclosure, is consistent with Section 3.4.1 of the Settlement Agreement and Mutual Release, which states that you must pay the reinstated rent obligation “...until the date when Probe 1 and the Accessories are delivered in the condition required by this Agreement.”

Properties, page 9

3. We read your response to prior comment 1, and note that while you revised disclosure to clarify that ownership of the hyper-spectral instrument is shared with members of ESSI Probe I LLC, you did not make a similar revision to the corresponding disclosure in your fiscal 2006 Form 10-KSB/A1 draft amendment. Please ensure that revisions are consistently made in all filings, where applicable. We reissue prior comment 1.

Financial Statements, page F-1

Statement of Changes in Stockholders' Deficit, page F-4

4. We see that, in response to prior comment 5, you corrected the total amount for the "Common Shares" column as of March 31, 2007, and the totals for each of the columns in this statement now agree with the corresponding amounts reported on your balance sheet. However, we again note that the total amount of \$72,000, corresponding to the line item inserted in this statement to reflect the common stock issued for loan extensions, is not reflected in the "Total" column of the statement, and does not appear to be included in the mathematical summation of the "Total" column. Accordingly, please amend your filing to correct these inconsistencies. We reissue prior comment 5.

Form 10-QSB for the Fiscal Quarter Ended September 30, 2007

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 9

Corporate Focus, page 9

5. We read your response to prior comment 12, and note that you removed the following sentence from the penultimate paragraph of this section, on page 11, in your draft Form 10-QSB/A1 for the quarterly period ended June 30, 2007: "The payment of approximately \$8,216,424 of STDC accounts payable due subcontractors and vendors on the NEMO program is being resolved." Although you removed the disclosure and advised that this sentence had been included by mistake, we note that you make this disclosure again, now in your most recent interim Form 10-QSB filing, covering the quarterly period ended September 30, 2007. We reissue prior comment 12.

Controls and Procedures, page 15

6. We note that, in response to prior comment 11, you revised disclosures about changes in your internal controls over financial reporting in the draft amendments to your interim reports for the periods ended June 30, 2007 and September 30, 2006, to be consistent with the disclosure requirements set forth in Item 308 of Regulation S-B. However, in your most recent interim filing, covering the period ended September 30, 2007, you repeat the non-conforming language. We reissue prior comment 11.

Closing Comments

As appropriate, please amend your filings 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 amendments to expedite our review. Please furnish a cover letter with your amendments 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.

You may contact Donald F. Delaney, at (202) 551-3863, if you have questions regarding comments on the financial statements and related matters. Please contact me, at (202) 551-3686, with any other questions.

Sincerely,

Karl Hiller
Branch Chief

cc: Ruba Qashu (via fax)
Richardson & Patel LLP