



DIVISION OF  
CORPORATION FINANCE  
MAIL STOP 7010

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

November 13, 2007

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 September 14, 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 September 14, 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

Properties, page 9

1. We have read the disclosure you proposed in response to prior comment 7, regarding ownership of a hyper-spectral instrument. Please revise the second sentence of your proposed disclosure to clarify whether ownership is shared with "members of the Company," as you state, or owners of ESSI Probe I LC.

Litigation, page 9

2. We note your response to prior comment 16, indicating that you do not believe the settlement agreement with Accuprobe would be subject to the guidance in SFAS 15, as it had to do with resolving a dispute about ownership and amounts due. Since you characterize the settlement as “forgiveness of debt,” had a capital lease for the probe that is associated with the balance due, and described the revised arrangement as “new debt,” it is unclear how you arrived at the view that SFAS 15 did not apply. Please submit the original agreements, any amendments, and the settlement agreement so that we may better understand your position. In addition, please further revise the disclosures you added in response to prior comment 16 under this heading and Note 10 to your financial statements, to address the following points. Please make similar revisions in the corresponding sections of your 2006 report (Item 3 and Note 7).
  - Explain how you determined that it was economically advantageous, and in the best interests of your shareholders, to incur the shipping, handling and disposition fees, plus rents, interest on unpaid rents, and late fees, now amounting to \$5,434,259 in the aggregate (as disclosed), rather than return the hyperspectral probe as you had agreed. It should be clear how your utilization of the probe, while in default under the terms of your settlement arrangement, supports your conclusions in this regard.
  - Disclose any ownership relationships or affiliations between you, your management, and the counterparty to the settlement agreement.
  - State your rationale for recognizing the settlement gain in 2006 rather than 2005, given that you have identified March 23, 2005 as the date of your settlement arrangement, a date prior to your 2005 fiscal year end.

Management’s Discussion and Analysis, page 11

Liquidity and Capital Resources, page 12

3. We have read the disclosure you added in response to prior comment 17, concerning the \$10.1 million gain associated with “the settlement of certain debt.” Since you recognized the gain only after you determined that the statute of limitations would preclude collection efforts by the counterparties, please further revise your disclosures to clarify that you have no settlement agreement and that you never paid the amounts due.

Executive Compensation, page 18

Employment Contracts, page 19

4. We note that in response to prior comment 10 you included a revised disclosure about executive compensation, which cross references the corresponding disclosure in your financial statements, Note 8. However, we also note that in making this revision to your draft amendment, you did not remove the previous disclosure, resulting in both the former and revised disclosures being present in your draft amended filing. Accordingly, we remind you to remove the superseded disclosure, and ensure that all disclosures that have been superseded are similarly removed from your amended filing.

Financial Statements, page F-1

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

5. We see that, in response to prior comment 13, you inserted a line item in this statement to reflect the common stock issued for loan extensions. However, as a result of this insertion, the total amount for the "Common Shares" column as of March 31, 2007, does not mathematically agree with the summation of the amounts now presented in this column, and the total for this new line item is not reflected in the "Total" column of the statement. Further, as a result of these changes, the totals for each of these columns will no longer agree with the corresponding balances reported on your balance sheet. Accordingly, please amend your filing to correct these inconsistencies.

Note 1 – Summary of Operations and Significant Accounting Policies, page F-6

6. It appears you will need to further revise your filing to include the segment disclosures necessary to comply with the guidance of SFAS 131, as you had provided in your 2006 report. However, given the disclosure on page F-7 of your 2006 draft amendment, explaining that you ceased oil and gas operations in 2006, it appears that you would also need to present the related activity as discontinued in your 2006 and 2007 (annual and interim) reports to comply with paragraphs 28 and 42 of SFAS 144. Since this had been shown as a separate segment, we would expect similar revisions in that disclosure.
7. We read your responses to prior comments 14 and 15, explaining that you would revise your disclosures to clarify that Petro Probe was your only active subsidiary, and to correctly associate activity with the appropriate fiscal years. However, upon review of your proposed fiscal 2007 draft Form 10-KSB amendment, neither of these proposed disclosure revisions has been reflected. We reissue prior comments 14 and 15.

Exhibit 23.1

8. We note that you included a revised version of the consent from your auditors, pertaining to the incorporation-by-reference of their audit opinion along with your periodic report into the Form S-3 that you filed on June 30, 2003, dated July 16, 2007, which coincides with the date you filed your fiscal 2007 Form 10-KSB. We remind you to obtain an *updated* consent from your accountants, as required by Item 601(b)(23) of Regulation S-B, and include it in your amended filing.

Form 10-KSB/A1 (draft) for the Fiscal Year Ended March 31, 2006

9. We noted several areas in your draft filing, where your revised disclosure references information that pertains to fiscal 2007, rather than the fiscal years 2006 or 2005, which are the years covered by the report. For example, on the cover page of this 2006 report, you present your 2007 revenues for the line item, "State issuer's revenues for its most recent fiscal year." Additionally, in the first and thirteenth paragraphs of Item 1, you disclose information pertaining to fiscal 2007. The information disclosed in this filing should relate to the most recent fiscal years covered by the report, based on information that was available at the time of the original filing.

Form 10-QSB/A1 (draft) for the Fiscal Quarter Ended September 30, 2006

Financial Statements, page 3

Notes to Financial Statements, page 6

Note 5 – Restatement, page 6

10. In the table that reflects the restated consolidated statement of cash flows, the "as reported" net loss amount of \$1,602,332, does not mathematically agree with the actual amount of net loss originally reported, which amounted to \$2,465,453.

Controls and Procedures, page 10

11. We note that you did not comply with prior comment 2, as it relates to disclosure in the draft amendment to your interim report stating there has been "...no significant change in [y]our internal control...that occurred during the period covered by this report." We also observed this similar disclosure in your most recent Form 10-QSB filing, for the fiscal quarter ended June 30, 2007. We reissue prior comment 2.

Mr. Larry F. Vance  
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Page 5

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

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

Corporate Focus, page 9

12. We note in the penultimate paragraph of this section, on page 11, you state, "The payment of approximately \$8,216,424 of STDC accounts payable due subcontractors and vendors on the NEMO program is being resolved." From prior correspondence with you, and based on your fiscal 2007 Form 10-KSB filing, we understood that the accounts payable associated with this program were extinguished, as a result of the expiration of applicable statutes of limitation. Please tell us whether these are additional payables in connection with this program, which have not yet been extinguished, or update your disclosure to reflect the most recent accounting activity associated with these liabilities.

Litigation, page 14

13. In the last paragraph of this section, you state that you had accrued \$6,185,101 in rents, interest and late fees, as of June 30, 2007. However, this amount does not agree with the corresponding item reflected on your balance sheet, and elsewhere in your filing, which amounts to \$6,363,800. Accordingly, please revise your disclosure to eliminate or explain the reasons for this inconsistency.

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