



DIVISION OF
CORPORATION FINANCE
Mail Stop 7010

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

October 24, 2008

Via U.S. Mail and Facsimile

Mr. Richard F. Miles, President and Chief Executive Officer
Geokinetics Inc.
1500 City West Blvd., Suite 800
Houston, Texas 77042

**Re: Geokinetics Inc.
Supplemental Response to Comment Letter issued September 25, 2008
Filed October 9, 2008
File No. 1-33460**

**Form 10-K for the fiscal year ended December 31, 2007
Filed March 12, 2008**

**Definitive Proxy Statement on Schedule 14A
Filed April 29, 2008**

Dear Mr. Miles:

We have reviewed your supplemental response dated October 9, 2008, and we have the following comments. Where indicated, we think you should provide supplemental responses to these comments. If you disagree, we will consider your explanation as to why our comments are inapplicable. 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.

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.

Form 10-K for the Fiscal Year Ended December 31, 2007

Item 7. Management's Discussion and Analysis of Financial Condition...., page 23

1. We note your response to prior Comment 3 stating that the information can be found on pages 12-17, 26-31 and 39 of the 10-K and reissue the comment seeking clarification. Please provide a response addressing the trends and uncertainties on which the company's executives are most focused for both the short and long term which you potentially will use in future filings and the specific location of the information requested in your 10-K. In particular, please specifically address the trend used as an example in our prior comment.

Controls and Procedures, page 40

2. We note your response to prior comment 5. If the examples you provided did not rise to the level of "materially affected," then you should delete the phrase "except for the changes as noted below" in your conclusion that there "have not been any changes in the Company's internal control...that have materially affected or are reasonably likely to materially affect its internal control over financial reporting." In addition, to the extent you wish to provide examples and yet conclude that "there have not been any changes," provide in your filing the clarification that the examples you provide did not rise to the level of "materially affected."

Definitive Proxy filed June 24, 2008

Compensation Discussion and Analysis, page 21 and Allocation of Compensation...., page 22

3. We note your response to prior comments 9 and 10 and reissue those comments, as well as prior comment 8, which asked that you to provide us with examples of the disclosure you intend to use. While we understand that you are not able to go into specifics about 2008 compensation at this time, provide us with sample disclosure regarding 2007 compensation so we may understand how you would specifically address our comments in future filings. Disclose the "company, business segment and/or individual goals and objectives" that were achieved that gave rise to the bonus compensation paid in 2007. The general reference to the Senior Executive Incentive Program and the general disclosure of that Program in the proxy statement does not provide sufficient information as to why or how Mr. Miles received a bonus of \$256,000 for the 2007 plan year, for example. Provide a description of the specific levels of achievement of each named executive officer relative to the targets as well as any additional information pertaining to each individual's performance that the Committee considered in determining specific payout levels for 2007. Discuss the specific reasons for the incentive stock option grants on December 10, 2007. Disclose the specific "company performance and personal performance" components last year that gave rise to any variable compensation, as discussed in your response to prior comment 10. Please provide us with detailed draft disclosure to address these items.

Allocation of Compensation..., page 22

4. We note your response to prior comment 12 and reissue that comment. We do not agree that competitive reasons and the need for consultants' consent provide sufficient bases to omit the information required by Item 402(b)(2)(xiv) with respect to the components of your benchmarks. In addition, your response to prior comment 10 states that you will "benchmark jobs in each family and use salary surveys and competitive market pricing of these positions." Provide the information required by Item 402(b)(2)(xiv) with respect to the benchmark to be used.

Closing Comments

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. 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.

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.

Mr. Richard F. Miles
Geokinetics Inc.
October 24, 2008
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Please contact Douglas Brown at (202) 551-3265 or in his absence, me at (202) 551-3611 with any questions.

Sincerely,

Anne Nguyen Parker
Branch Chief

cc: A. N. Parker
D. Brown