



DIVISION OF  
CORPORATION FINANCE  
Mail Stop 7010

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

September 25, 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.  
Form 10-K for the fiscal year ended December 31, 2007  
Filed March 12, 2008  
File No. 1-33460**

**Definitive Proxy Statement on Schedule 14A  
Filed April 29, 2008  
File No. 1-33460**

Dear Mr. Miles:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document 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.

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.

Legal Comments

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

Item 1. Business, page 3

Customers, page 8

1. You state in Note 15 to the financial statements that, for the year ended December 31, 2007, one individual customer represented 12% of total revenue. Please disclose this information in this section and provide the name of the customer. Please tell us whether you have any written contracts with this customer and provide us with an analysis as to whether any such contracts should be filed as an exhibit.

Item 1A. Risk Factors, page 12

A majority of the Company's voting stock is controlled by a small number of stockholders..., page 16

2. Please disclose in this risk factor that Messrs. Webster and Ziegler are also members of your board of directors. In addition, please disclose that, in accordance with the terms and provisions of the Securities Purchase Agreement dated September 8, 2006 with the purchasers of the Company's Series B preferred stock, Avista received the right to appoint one director to the Company's board of directors, which director is Mr. Cabes, Jr.

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

3. Please supplement your Overview section to provide insight into material opportunities, challenges and risks, such as those presented by known material trends and uncertainties, on which the company's executives are most focused for both the short and long term. See Section III.A of SEC Release 33-8350 (Nov. 29, 2003). For example, it appears that, while your net operating revenues have increased exponentially in the last 5 years, so have your net loss and loss applicable to common stockholders. Please address this trend in the overview section and briefly discuss the effects on your results of operations, working capital requirements and liquidity.

Controls and Procedures, page 40

4. We note your statements that "...even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives," and, "[a] control system, no matter how well conceived and operated, can provide only reasonable, no absolute, assurance that the objectives of the internal control system are met." Please revise to state clearly, if true, that your disclosure controls and procedures are *designed* to provide reasonable assurance of achieving their objectives and that your principal executive officer and principal financial officer concluded that your disclosure controls and procedures are effective at that reasonable assurance level. In the alternative, remove the reference to the level of assurance of your disclosure controls and procedures. Please refer to Section II.F.4 of Management's Reports on Internal Control Over Financial Reporting and Certification of Disclosure

in Exchange Act Periodic Reports, SEC Release No. 33-8238, available on our website at <http://www.sec.gov/rules/final/33-8238.htm>.

5. We note your disclosure that “There have not been any changes in the Company’s internal control (as defined in the Exchange Act Rule 13a-15(f) of the Securities Exchange Act) during the quarter ending December 31, 2007, that have materially affected or are reasonably likely to materially affect its internal control over financial reporting except for the changes as noted below.” Revise to state clearly, if correct, that there *were* changes in your internal control over financial reporting that occurred during this quarter that have materially affected, or are reasonably likely to materially affect, your internal control over financial reporting.

### Signatures

6. Please provide the signature of your controller or principal accounting officer. See General Instruction D(2) to Form 10-K.

### Certifications by CEO and CFO Pursuant to Rules 13a-14(a) and 15d-14(a)...., exhibits 31.1 and 31.2

7. In future filings, please match the exact form set forth in Item 601(b)(31) of Regulation S-K. For example, we note that a comma was omitted in paragraph 4(b) and the word “the” was omitted from paragraph 5 in both certifications.

### Definitive Proxy filed June 24, 2008

8. Please confirm in writing that you will comply with the following comments in all future filings. Provide us also with examples of the disclosure you intend to use. Please understand that after our review of your responses, we may raise additional comments.

### Compensation Discussion and Analysis, page 21

9. Please provide further analysis of how you arrived at and why you paid each of the particular levels and forms of compensation for 2007. For example, disclose the “company, business segment and/or individual goals and objectives” that were achieved that gave rise to the bonus compensation paid in 2007. 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. As another example, disclose the “financial objectives” contained in the 2007 Plan. As another example, discuss the specific reasons for the incentive stock option grants on December 10, 2007. Please provide sufficient quantitative and qualitative analysis of the factors the Committee considered in making specific compensation awards. See Item 402(b)(1)(v) of Regulation S-K.

Allocation of Compensation Among the Principal Components, page 22

10. Please provide clear disclosure that addresses how each compensation component (i.e., base salary, cash incentive compensation, and equity compensation) and your decisions regarding these elements are made, including sufficient quantitative or qualitative disclosure, as appropriate, of the analyses underlying the Committee's decision to make specific compensation awards. For example, please provide the "established formal policies and guidelines" used in your determination of the mix of the compensation components.
11. Please disclose the specific "financial goals and objectives" used in your determination of the cash incentives. If you believe disclosing the targets would result in competitive harm such that the targets could be excluded properly under Instruction 4 to Item 402(b) of Regulation S-K, please provide on a supplemental basis a detailed explanation supporting your conclusion. If disclosure of the quantitative or qualitative performance-related factors would cause competitive harm, you are required to discuss how difficult it will be for you to achieve the target levels or other factors. See Instruction 4 to Item 402(b) of Regulation S-K.
12. Please clarify "the internal peers and external market data for similar roles" used in your determination of executives' base salaries for 2007. See generally Item 402(b)(2)(xiv) of Regulation S-K. Please identify the internal peers and the external market data you evaluated and specify how each element of compensation relates to the data you analyzed from the comparator companies.

Bonus Compensation, page 23

13. Please describe the types of "unusual circumstances" that might result in a guaranteed bonus and provide insight into the factors the Committee considers when establishing this type of compensation. See Item 402(b)(1)(v) and Instruction 1 of Item 402(b) Regulation S-K.

Closing Comments

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

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

Mr. Richard F. Miles  
Geokinetics Inc.  
September 25, 2008  
Page 5

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.

Please contact Douglas Brown at (202) 551-3265 or in her absence, me at (202) 551-3611 with any questions.

Sincerely,

Anne Nguyen Parker  
Branch Chief

cc: A. N. Parker  
D. Brown