



DIVISION OF
CORPORATION FINANCE
MAIL STOP 7010

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
100 F Street, N.E.
WASHINGTON, D.C. 20549-7010

April 24, 2007

Mr. Earl R. Wait
Vice President - Accounting
Natural Gas Services Group, Inc.
2911 South County Road 1260
Midland, Texas 79706

Re: Natural Gas Services Group, Inc.
Form 10-K for Fiscal Year Ended December 31, 2006
Filed March 15, 2007
File No. 1-31398

Dear Mr. Wait:

We have reviewed your filing and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. 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.

Form 10-K for the Fiscal Year Ended December 31, 2006

Selected Financial Data, page 19

1. We note your disclosure of “gross profit, exclusive of depreciation” here and in the tables on page 22 and 24. Such metric is a non-GAAP financial measure as defined under Regulation S-K Item 10(e). Provide all of the disclosures required by this Item for presentation of this non-GAAP financial measure or remove this metric in your amended filing.

Management Discussion and Analysis of Financial Condition and Results of Operations

Liquidity and Capital Resources, page 28

2. You disclose that you funded operations, in part, from your cash flow from operations and have recited and quantified the various components of that metric. Revise this discussion to address the reasons for material changes in such line items, particularly where identification of two or more factors may be necessary to an understanding of a material change. Refer to Instruction 4 of Regulation S-K Item 303(a) and Financial Reporting Codification Section 501.04.

Consolidated Balance Sheet, page F-3

3. We note the line item accounts payable and accrued liabilities. Tell us the descriptions and related amounts of the accrued liabilities. Amend your disclosure here or in a footnote to provide disclosure of any item in excess of 5% of total current liabilities.
4. The subordinated notes, as described in footnote seven, appear to be due to related parties as discussed elsewhere in your filing under Item 13. Revise this description and disclosure to clearly indicate the related party nature of these notes.

Consolidated Statements of Cash Flows, page F-6

5. You have reported proceeds from the sale of property and equipment as an investing activity and removed the related gross profit from your operating activities. Your disclosure in footnote one indicates the revenue from the sale of rental units is included in sales revenue. Tell us why you consider the proceeds from the sale of property and equipment an investing activity when the revenue from such sales appears to be a normal part of your ongoing operations. We may have further comment.

Exhibits 31.1 and 31.2

6. We note that the certifications required by Exchange Act Rule 13(a)-14(a) differ from the exact wording required by Regulation S-K Item 601(b)(31). Please revise your certifications for the following items.
- The title should refer only to “certifications”,
 - The title of the certifying individual at the beginning of the certification should be removed, and
 - The fourth numbered paragraph should also include reference to internal control over financial reporting as specified by Regulation S-K Item 601(b)(31).

Exhibits 32.1 and 32.2

7. We note that these certifications identify the wrong periodic report. Amend these certifications to refer to the fiscal year ended December 31, 2006.

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 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

Mr. Earl R. Wait
Natural Gas Services Group, Inc.
April 24, 2007
page 4

- 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.

You may contact Gary Newberry at (202) 551-3761 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3684 with any other questions.

Sincerely,

April Sifford
Branch Chief