



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-4628

July 30, 2009

Mr. Stephen C. Taylor
Chairman and Chief Executive Officer
Natural Gas Services Group, Inc.
508 W. Wall St., Suite 550
Midland, TX 79701

Re: Natural Gas Services Group, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2008
Filed March 9, 2009
Definitive Proxy
Filed April 27, 2009
File No. 1-31398

Dear Mr. Taylor:

We have reviewed your filings and have the following comments. Please provide a written response to our comments. 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, 2008

Major Customers, page 4

1. Ensure that you file as exhibits all materials contracts pursuant to Item 601(b)(10) of Regulation S-K. Also disclose the material terms of all such material contracts. In that regard, we note the contributions of Devon and XTO to your consolidated revenues in 2008.

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Controls and Procedures, page 30

2. Please include the disclosure required by Item 308(a)(4) of Regulation S-K.

Definitive Proxy

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

Executive Compensation, page 12

Executive Compensation Levels of other Companies in the Natural Gas Compression and Related Businesses, page 14

3. Based on your disclosures here and on page 18 under the caption “Assistance of Compensation Consultants,” it appears that you may engage in compensation benchmarking. Please identify the companies that you looked to in determining competitive compensation levels in your industry, and explain in greater detail how this data were considered in awarding compensation. In addition, state what you determined the industry median was for your industry and how you arrived at that figure.
4. Where compensation differed materially from the 20% of median range that you target, disclose the reasons for the variance. See Item 402(b)(xiv) of Regulation S-K and Compliance and Disclosure Interpretations Question 118.05, found at www.sec.gov.

Individual and Company Performance, page 14

5. Please disclose the specific performance levels you considered in awarding stock options in 2008, including the targets for cash flow from operations, earnings per share, market share, and market value of your common stock. See Item 402(b)(2)(v)-(vi) of Regulation S-K. To the extent you believe that disclosure of the targets would result in competitive harm such that they 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. To the extent disclosure of the quantitative or qualitative performance-related factors would cause you competitive harm, you are required to discuss how difficult it will be for you to achieve the target levels or other factors. Please see Instruction 4 to Item 402(b) of Regulation S-K and Regulation S-K Compliance and Disclosure Interpretations Question 118.04, found at www.sec.gov.

Short-Term Incentives – Incentive Cash Bonus Program, page 16

6. Please disclose the specific performance targets you set in 2008 for awards under your incentive cash bonus program, including total revenues, EBITDA, and net income before taxes. To the extent you believe this disclosure would result in competitive harm, follow the same guidance provided in the prior comment, above.
7. In a table or another appropriate manner, disclose each named executive officer's target award opportunity percentage, as well as the factors considered in setting each target.
8. Please describe the factors considered in awarding 15% of the possible 30% attributable to the total revenue performance metric, which was not met in 2008. In this regard, we note the illustration you provide in the fourth paragraph of this section, which appears to suggest that failure to meet a performance objective would result in a full 30% reduction.
9. Please provide a more detailed explanation of your reasons for awarding a portion of the bonuses in stock options. You state in the opening paragraph of this section that these bonuses are awarded in recognition of company performance, but you later state that the decision to award stock options in lieu of cash was premised on the notion that this would harmonize the interests of management and stockholders.
10. Identify for us where in your executive compensation tables you account for the portion of incentive bonuses awarded in stock options. Your disclosure here suggests that only the cash portion is included in the Non-Equity Incentive Plan Compensation column.
11. Please disclose the total amount awarded to your named executive officers under your Incentive Cash Bonus Program. Identify which portions were awarded in cash and which were awarded in stock options. To the extent that the allocation between cash and non-cash payment under this plan differed amongst officers, explain the reasons for any discrepancy.

Closing Comments

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. 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

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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.

Please contact John Lucas at (202) 551-5798 or, in his absence, Timothy Levenberg at (202) 551-3707 or me at (202) 551-3745 with any other questions.

Sincerely,

H. Roger Schwall
Assistant Director