

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

DIVISION OF  
CORPORATION FINANCE  
Mail Stop 7010

July 5, 2005

Mr. Robert S. Herlin  
President  
Natural Gas Systems, Inc.  
820 Gessner  
Suite 1340  
Houston, TX 77024

Re: Natural Gas Systems, Inc.  
Registration Statement on Form SB-2  
Filed June 6, 2005  
File No. 333-125564

Dear Mr. Herlin:

We have limited our review of your filing to those issues we have addressed in our 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Selling Stockholders, page 35

1. Expand the table to include the natural persons with power to vote or to dispose of the securities offered for resale by the entities that are listed as selling stockholders. If more than one holder is listed as beneficial owner for the same securities, include explanatory text or footnotes. See Exchange Act Rule 13d-3; see also Instruction 8 to Item 403 of Regulation S-B.
2. Identify as underwriters all selling stockholders who are registered broker-dealers. Otherwise, confirm to us that all securities being resold by registered broker-dealers constitute compensation for investment banking services. Identify as underwriters all affiliates of registered broker-dealers that are listed as selling stockholders unless you can confirm to us that
  - (1) each purchased its securities in the ordinary course of business and
  - (2) at the time of purchase, the stockholder had no agreements or understandings, directly or indirectly, with any party to distribute the securities.

3. We note that the selling shareholders may engage in short sales of your common stock. Please see Corporation Finance Telephone Interpretation A.65 in that regard.

Experts, page 45

4. We note that you identify the name of an expert in connection with the reserve estimates disclosed on page F-14. Identify the expert in this section. Also, file as an exhibit the consent of the expert, as required by Item 601(b)(23) of Regulation S-B.

Financial Statements

5. Please revise to comply with Item 310 of Regulation S-B. Refer to items III C. and III F. at: <http://www.sec.gov/divisions/corpfin/guidance/cfactfaq.htm>. We will resume our review after you have filed a satisfactory amendment. Please call us to discuss this comment before responding to this letter.

Engineering Comments

Risk Factors, page 3

Crude oil and natural gas development, re-completion of wells from one reservoir to another reservoir, and restoring wells to production are speculative activities and involve numerous risks and substantial and uncertain costs, page 8

6. You state, "Although we may discuss in this prospectus drilling prospects that we have identified or budgeted for, we may ultimately not lease or drill these prospects within the expected time frame, or at all." Amend your document to disclose all unleased prospects, if any, which you have discussed herein.

Management's discussion and analysis of financial condition and results of operations, page 14

Significant properties, estimated proved crude oil and natural gas reserves, and future net revenues, page 18

7. You state that you engaged W.D. Von Gonten & Associates to perform independent reviews of your proved developed reserves. On page 25, you state Von Gonten "audits our reserves". On page F-14, your disclosed proved reserves are captioned "Proved Developed and Undeveloped Reserves Prepared by W.D. Von Gonten & Co. Petroleum Engineers". Tell us which of these three terms is applicable to this filing. Amend your document to eliminate the inconsistency in usage of these three terms and to explain the meaning of the applicable terms in the context of petroleum reserve estimation.

Proved Reserves, page 19

8. Your table contains the sum of three acquisitions' reserve volumes even though each had a different effective date and, thus, different proved reserve economics. Amend your document to: eliminate the summation of proved reserves estimated at different dates;

disclose each acquisition, its associated proved reserves, purchase price and other information that you consider pertinent; explain or change the \$8.17/MCF gas price - the Henry Hub spot price for January 1, 2004 was \$5.79/MMBTU.

Business, page 21

Business Activities, page 22

9. You state the advantages of focusing on reservoirs that are shallower, more complex and have lower permeability. Please balance this in your risk factors by disclosing that: shallow reservoirs usually have lower pressure and, necessarily, lower hydrocarbons in place; complex reservoirs are more difficult to analyze and exploit; low permeability reservoirs require more wells for development and such wells have low, even uneconomic, production rates.

Tullos Field Area, page 26

10. You state, "Our current production rate is approximately 65 barrels of crude oil per day..." Please amend your document here and elsewhere to include the dates to which these production rates apply.

Glossary of Terms, page 46

11. Your definition of "Standardized Measure" references "PV-10". Please amend your document to include PV-10 in your glossary.

Supplemental Oil and Gas Disclosures (Unaudited), page F-14

12. You combine extensions, discoveries and revisions to your proved reserve estimates into one line item. As prescribed by paragraph 11 of Financial Accounting Standard 69, please amend your document to disclose revisions as a line item separate from extensions and discoveries and to explain the 270 MMCFG negative revision to your July 1, 2004 proved gas reserves.

Closing Comments

As appropriate, please amend your registration statement in response to these comments. 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 Act of 1933 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.

Notwithstanding our comments, in the event the company requests

acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

? should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;

? the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and

? the company may not assert staff comments and the declaration of effectiveness 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 connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Barry Stem, Senior Assistant Chief Accountant, at (202) 551-3763 if you have questions regarding comments on the financial statements and related matters. Direct questions relating to the engineering comments to Ronald Winfrey, Petroleum Engineer, at (202) 551-3704. Please contact Carmen Moncada-Terry at (202) 551-3687 or, in her absence, Timothy Levenberg at (202) 551-3707 with any other questions.

Sincerely,

H. Roger Schwall

Assistant Director

cc: C. Moncada-Terry  
T. Levenberg  
B. Stem  
R. Winfrey

Mr. Robert S. Herlin  
Natural Gas Systems, Inc.  
July 5, 2005  
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