

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

SCHEDULE 13D

**Under the Securities Exchange Act of 1934
(Amendment No. 5)***

NATURAL GAS SERVICES GROUP, INC.

(Name of Issuer)

Common Stock, \$.001 par value

(Title of Class of Securities)

63886 Q109 – Common Stock

(CUSIP Number)

Gregory J. Sergesketter, Gardere Wynne Sewell LLP,
1000 Louisiana, Suite 3400, Houston, Texas 77002, 713.276.5500

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

February 17, 2006

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 (the "Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP NOS. 63886 Q109

1 NAMES OF REPORTING PERSONS.

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (entities only)

Charles L. Barney

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

7 SOLE VOTING POWER

0

NUMBER OF
SHARES
BENEFICIALLY
OWNED BY
EACH
REPORTING
PERSON
WITH

8 SHARED VOTING POWER

314,600

9 SOLE DISPOSITIVE POWER

0

10 SHARED DISPOSITIVE POWER

314,600

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

314,600

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions)

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

3.5%

14 TYPE OF REPORTING PERSON (See Instructions)

IN

CUSIP NOS. 63886 Q109

1 NAMES OF REPORTING PERSONS.

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (entities only)

CBarney Investments, Ltd.

76-0664660

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Texas

7 SOLE VOTING POWER

NUMBER OF
SHARES
BENEFICIALLY
OWNED BY
EACH
REPORTING
PERSON
WITH

0

8 SHARED VOTING POWER

41,998

9 SOLE DISPOSITIVE POWER

0

10 SHARED DISPOSITIVE POWER

41,998

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

41,998

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

0.5%

14 TYPE OF REPORTING PERSON (See Instructions)

PN

CUSIP NOS. 63886 Q109

1 NAMES OF REPORTING PERSONS.

I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (entities only)

Mark X Energy Company

73-1398206

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

WC

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Oklahoma

7 SOLE VOTING POWER

0

8 SHARED VOTING POWER

272,602

9 SOLE DISPOSITIVE POWER

0

10 SHARED DISPOSITIVE POWER

272,602

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

272,602

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

3.0%

14 TYPE OF REPORTING PERSON (See Instructions)

CO

Item 1. Security and Issuer.

State the title of the class of equity securities to which this statement relates and the name and address of the principal executive offices of the issuer of such securities.

Natural Gas Services Group, Inc. (the "Company")
Common Stock, \$.001 par value
2911 SCR 1260
Midland, Texas 79706

Item 2. Identity and Background.

(a) Name of Persons Filing (the "Reporting Persons"):

Charles L. Barney
CBarney Investments, Ltd.
Mark X Energy Company

(b) Business address of Reporting Persons:

952 Echo Lane, Suite 364
Houston, Texas 77024

(c) Charles L. Barney's principal occupation is as the sole owner, directly or indirectly, of companies that invest in securities, oil and gas working interests, and real estate. All of such entities addresses are 952 Echo Lane, Suite 364, Houston, Texas 77024.

Both CBarney Investments, Ltd. and Mark X Energy Company invest in securities, oil and gas working interests, and real estate.

(d) During the last five years, none of Charles L. Barney, CBarney Investments, Ltd., Mark X Energy Company or their affiliates has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) During the last five years, none of Charles L. Barney, CBarney Investments, Ltd., Mark X Energy Company or their affiliates was a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) Citizenship:

Charles L. Barney is a citizen of the United States of America.
CBarney Investments, Ltd. is a Texas limited partnership.
Mark X Energy Company is an Oklahoma corporation.

Item 3. Source and Amount of Funds or Other Consideration.

On August 4, 2004, in a private placement transaction pursuant to a Securities Purchase Agreement, dated as of July 20, 2004 between the Company and CBarney Investments, Ltd. (a portion of which was assigned to Mark X Energy Company) (the "Securities Purchase Agreement"), CBarney Investments, Ltd. and Mark X Energy Company purchased from the Company 549,574 and 100,000 shares, respectively, of the Company's common stock for an aggregate purchase price of \$5,000,000 (or approximately \$7.69735 per share). The source and amount of funds for the purchase of these shares was (i) for CBarney Investments, Ltd., approximately \$1,871,000 from working capital through previous sales of marketable securities and approximately \$2,359,000 from working capital through distributions received on account of its other ownership interests and (ii) for Mark X Energy Company, approximately \$330,000 from working capital through previous sales of marketable securities and approximately \$440,000 from working capital through distributions received on account of its other ownership interests.

More than 60 days prior to the preceding transaction, open market purchases of (i) 5,000 shares of the Company's common stock and warrants to purchase 168,500 shares of the Company's common stock were made by Mark X Energy Company and (ii) warrants to purchase 47,700 shares of the Company's common stock were made by CBarney Investments, Ltd. The warrants were exercisable for the Company's common stock at an exercise price of \$6.25 per share of the Company's common stock (the "Warrants").

On March 4, 2005, CBarney Investments, Ltd. and Mark X Energy Company made open market purchases of 3,400 and 50,000 shares of the Company's common stock, respectively. On March 10, 11 and 14, 2005, Mark X Energy Company made open market purchases of 5,200, 5,000 and 1,900 Warrants, respectively, pursuant to a Rule 10b5-1(c) Purchase Plan. From April 15 to May 31, 2005, CBarney Investments, Ltd. and Mark X Energy Company made open market purchases of 37,500 and 209,100 Warrants, respectively, pursuant to the Rule 10b5-1(c) Purchase Plan. CBarney Investments, Ltd. and Mark X Energy Company made these purchases with their available working capital.

Pursuant to their terms, the Warrants could be redeemed by the Company at \$0.25 per Warrant if the price of a share of the Company's common stock exceeded \$10.9375 for 20 consecutive trading days. These terms were met and the Company announced on July 28, 2005 that any outstanding Warrants would be redeemed on September 6, 2005. As such, on August 18, 2005, (i) CBarney Investments, Ltd. exercised 86,298 Warrants, receiving 86,298 shares of the Company's common stock and (ii) Mark X Energy Company exercised 391,102 Warrants, receiving 391,102 shares of the Company's common stock.

On September 15, 2005, Mark X Energy Company gifted to LSU Foundation 45,000 shares of the Company's common stock. We understand that LSU Foundation sold those share on or before September 20, 2005.

On November 28, 2005, Mark X Energy Company and CBarney Investments, Ltd. filed a Form 144 for the proposed sale of 100,000 and 150,000 shares of the Company's common stock, respectively. From December 5, 2005 to December 9, 2005, Mark X Energy Company sold 90,800 shares of the Company's common stock. On January 19, 2006, Mark X Energy Company sold 9,200 shares and CBarney Investments, Ltd. sold 150,000 shares of the Company's common stock. All of the shares subject to the Form 144 were purchased pursuant to the Securities Purchase Agreement.

On January 20, 2006, CBarney Investments, Ltd. filed a Form 144 for the proposed sale of 399,574 shares of the Company's common stock. From January 20, 2006 to January 23, 2006, CBarney Investments, Ltd. sold the 399,574 shares of the Company's common stock, all of which were purchased pursuant to the Securities Purchase Agreement.

On February 17, 2006, Mark X Energy Company sold 128,500 shares and CBarney Investments, Ltd. sold 47,700 shares of the Company's common stock.

CBarney Investments, Ltd. and Mark X Energy Company are the holders of the Company's securities. The sole general partner of CBarney Investments, Ltd. is Celby & Co., LLC, a Texas limited liability company. Its sole owner is Barney Properties I, Inc., a Texas corporation, of which Charles L. Barney is the sole shareholder. The sole limited partner of CBarney Investments, Ltd. is Mark Holding Company, Inc., a Delaware corporation. Its sole stockholder is Charles L. Barney. The sole shareholder of Mark X Energy Company is Kim Lake, Inc. a Texas corporation, of which Charles L. Barney is the sole shareholder.

Item 4. Purpose of Transaction.

The Reporting Persons acquired and hold the securities reported herein for investment purposes. Depending on market conditions and other factors that the Reporting Persons may deem material to their investment decision, the Reporting Persons may sell all or a portion of the securities of the Company that they now own or hereafter may acquire on the open market or in private transactions. Depending on these same factors, the Reporting Persons may purchase additional securities of the Company in the open market or in private transactions, but has no present intention to do so.

Pursuant to the Securities Purchase Agreement, the Company granted the Reporting Persons board observation rights. However, the Reporting Persons have not exercised those rights for more than eight months. Since the Reporting Persons' ownership of the Company's Common Stock is now below five percent, the board observation rights are not in effect.

Except as set forth in this Item 4, the Reporting Persons have no present plans or proposals that relate to or that would result in any of the actions specified in Item 4 of Schedule 13D, but the Reporting Persons reserve the right to propose or undertake or participate in any such actions in the future.

Item 5. Interest in Securities of the Issuer.

CBarney Investments, Ltd. is the owner of 41,998 shares of the Company's common stock. These shares represent approximately 0.5% of the Company's common stock computed in accordance with Rule 13d-3. CBarney Investments, Ltd. has shared voting and dispositive power with Charles L. Barney with respect to these shares.

Mark X Energy Company is the owner of 272,602 shares of the Company's common stock. These shares represent approximately 3.0% of the Company's common stock computed in accordance with Rule 13d-3. Mark X Energy Company has shared voting and dispositive power with Charles L. Barney with respect to these shares.

As the sole indirect owner of CBarney Investments, Ltd. and Mark X Energy Company, Charles L. Barney is the beneficial owner of 314,600 shares of the Company's common stock. These shares represent approximately 3.5% of the Company's common stock computed in accordance with Rule 13d-3. Charles L. Barney has shared voting and dispositive power with (i) CBarney Investments, Ltd. with respect to the shares it owns and (ii) Mark X Energy Company with respect to the shares it owns, due to his ownership control of those entities.

CBarney Investments, Ltd. and Mark X Energy Company are the holders of the Company's securities. The sole general partner of CBarney Investments, Ltd. is Celby & Co., LLC, a Texas limited liability company. Its sole owner is Barney Properties I, Inc., a Texas corporation, of which Charles L. Barney is the sole shareholder. The sole limited partner of CBarney Investments, Ltd. is Mark Holding Company, Inc., a Delaware corporation. Its sole stockholder is Charles L. Barney. The sole shareholder of Mark X Energy Company is Kim Lake, Inc. a Texas corporation, of which Charles L. Barney is the sole shareholder.

The calculation of the percentages of beneficial ownership of Common Stock set forth above are based upon 9,031,783 shares of Common Stock outstanding as of February 13, 2006, as disclosed in the Company's Amendment No. 1 to Registration Statement on Form S-1 filed February 16, 2006.

For a description of the transactions in the class of securities reported on that were effected during the past sixty days by the Reporting Persons, see Item 3, "Source and Amount of Funds or Other Consideration".

On February 17, 2006, the Reporting Persons holdings of the Company's Common Stock dropped below five percent.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

Pursuant to the terms of the Securities Purchase Agreement, the Company agreed to:

- (a) Board observation rights for the Reporting Persons. However, these rights are not effective when the Reporting Persons own less than five percent of the Company's Common Stock.
- (b) Register the shares of the Company's common stock purchased under the Securities Purchase Agreement. The registration statement related to those shares is no longer applicable as those shares have been sold pursuant to transactions disclosed in Item 3.
- (c) Not use the proceeds from the sale of the Company's common stock under the Securities Purchase Agreement to (i) pay dividends; (ii) pay for any increase in executive compensation or make any loan or other advance to any officer, employee, shareholder, director or other affiliate of the Company, without the Reporting Persons' approval; (iii) subject to certain exceptions, purchase debt or equity securities of any entity (including redeeming the Company's own securities) or (iv) make any investment not directly related to the current business of the Company.

Item 7. Material to be Filed as Exhibits.

1. The Securities Purchase Agreement, dated as of July 20, 2004, between the Company and CBarney Investments, Ltd. (incorporated by reference to Exhibit 4.1 to the Company's Statement on Form 8-K dated July 20, 2004 and filed with the Commission on July 27, 2004).

2. An Agreement for Joint Filing pursuant to Rule 13d-1(k)(i) under the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 2 to the Schedule 13D filed by the Reporting Persons with the Commission on August 13, 2004).

Signatures

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

DATED: February 24, 2006

CBARNEY INVESTMENTS, LTD.

By: /s/ Gregory J. Sergesketter
Gregory J. Sergesketter, as attorney-in-fact

MARK X ENERGY COMPANY

By: /s/ Gregory J. Sergesketter
Gregory J. Sergesketter, as attorney-in-fact

/s/ Gregory J. Sergesketter
Gregory J. Sergesketter, as attorney-in-fact
for Charles L. Barney