

YORKTOWN ENERGY PARTNERS IV LP  
Form SC 13D/A  
August 25, 2008

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

**Schedule 13D  
Under the Securities Exchange Act of 1934  
(Amendment No. 1)\***

**GeoMet, Inc.  
(Name of Issuer)  
Common Stock  
(Title of Class of Securities)**

**37250U201  
(CUSIP Number)**

**Bryan H. Lawrence  
Yorktown Energy Partners IV, L.P.  
410 Park Avenue**

**19th Floor  
New York, New York 10022  
(212) 515-2112**

**Copies to:  
Jeffrey A. Zlotky  
Thompson & Knight LLP  
One Arts Plaza  
1722 Routh Street, Suite 1500  
Dallas, Texas 75201-2533  
(214) 969-1700**

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

**May 14, 2008**

**(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 which is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 204.13d-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(b) for other parties to whom copies are to be sent.

\*The remainder of the 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 ( 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).

1 NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS  
(ENTITIES ONLY)

YORKTOWN ENERGY PARTNERS IV, L.P.

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)

OO

5 CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS  
2(d) OR 2(e) N/A

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

7 SOLE VOTING POWER

NUMBER OF 14,187,072

8 SHARES BENEFICIALLY OWNED BY SHARED VOTING POWER

0

9 EACH REPORTING SOLE DISPOSITIVE POWER

PERSON 14,187,072

WITH SHARED DISPOSITIVE POWER

10

0

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

11

14,187,072 (1)

CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

12

o

PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

13

36.1%(2)

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

14

PN

(1) Yorktown IV Company LLC is the sole general partner of Yorktown Energy Partners IV, L.P. As a result, Yorktown IV Company LLC may be deemed to have the power to vote or direct the vote or to dispose or direct the disposition of the shares owned by Yorktown Energy Partners IV, L.P. Yorktown IV Company LLC disclaims beneficial ownership of the securities owned by Yorktown Energy Partners IV, L.P. in excess of its pecuniary interests therein.

(2) Based on 39,274,331 shares of the Issuer's common stock issued and outstanding as of July 1, 2008, as set forth in the Issuer's quarterly report on Form 10-Q for the quarter ended June 30, 2008, filed with the SEC on August 8, 2008.

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(ENTITIES ONLY)

YORKTOWN IV COMPANY LLC

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PERSON 14,187,072  
WITH SHARED DISPOSITIVE POWER  
10  
0

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
14,187,072 (1)

12 CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)  
o

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  
36.1%(2)

14 TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)  
OO

(1) Yorktown IV Company LLC is the sole general partner of Yorktown Energy Partners IV, L.P. As a result, Yorktown IV Company LLC may be deemed to have the power to vote or direct the vote or to dispose or direct the disposition of the shares owned by Yorktown Energy Partners IV, L.P. Yorktown IV Company LLC disclaims beneficial ownership of the securities owned by Yorktown Energy Partners IV, L.P. in excess of its pecuniary interests therein.

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This Amendment No. 1 amends the Schedule 13D with respect to the Common Stock of GeoMet, Inc., a Delaware corporation, previously filed on August 7, 2006 by Yorktown Energy Partners IV, L.P., a Delaware limited partnership (the Schedule 13D ). Capitalized terms used herein without definition shall have the meanings given to such terms in the Schedule 13D.

**Item 5. INTEREST IN SECURITIES OF THE ISSUER.**

Subparagraphs a, b and c of Item 5 in the Schedule 13D are amended and replaced in their entirety by the following:

(a) Yorktown IV beneficially owns 14,187,072 shares of the Common Stock, representing 36.1% of the Issuer's issued and outstanding shares of the Common Stock. Yorktown IV Company may, as the sole general partner of Yorktown IV, be deemed to be the beneficial owner of all 14,187,072 shares of the Common Stock beneficially owned by Yorktown IV. All calculations made herein are made in accordance with Rule 13d-3(d) of the Securities Exchange Act of 1934, as amended, and based on 39,274,331 shares of the Common Stock issued and outstanding as of July 1, 2008.

(b) Through Yorktown IV Company, its general partner, Yorktown IV has the sole power (and no shared power) to vote or direct the vote or to dispose or direct the disposition of 14,187,072 shares of the Common Stock. As the sole general partner of Yorktown IV, Yorktown IV Company has the sole power (and no shared power) to vote or direct the vote or to dispose or direct the disposition of 14,187,072 shares of the Common Stock.

(c) On May 14, 2008, Yorktown IV distributed in-kind, on a pro rata basis and for no additional consideration, in accordance with its limited partnership agreement, an aggregate of 806,489 shares of the Common Stock, to its limited and general partners (the First Distribution ). Upon the consummation of the First Distribution by Yorktown IV, Yorktown IV Company distributed in-kind, on a pro rata basis and for no additional consideration, in accordance with its operating agreement, all 157,308 shares of the Common Stock received in the First Distribution to its members.

On August 13, 2008, Yorktown IV distributed in-kind, on a pro rata basis and for no additional consideration, in accordance with its limited partnership agreement, an aggregate of 1,209,135 shares of the Common Stock, to its limited and general partners (the Second Distribution ). Upon the consummation of the Second Distribution by Yorktown IV, Yorktown IV Company distributed in-kind, on a pro rata basis and for no additional consideration, in accordance with its operating agreement, all 235,320 shares of the Common Stock received in the Second Distribution to its members.

**Item 7. MATERIAL TO BE FILED AS EXHIBITS.**

Exhibit 1 Joint Filing Agreement dated August 22, 2008

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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.

Date: August 22, 2008

YORKTOWN ENERGY PARTNERS IV, L.P.

By: Yorktown IV Company LLC

By: /s/ Bryan H. Lawrence

Name: Bryan H. Lawrence

Title: Member

YORKTOWN IV COMPANY LLC

By: /s/ Bryan H. Lawrence

Name: Bryan H. Lawrence

Title: Member