GeoMet, Inc. Form SC 13G/A February 10, 2011

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. 5) *

GEOMET INC

(Name of Issuer)

COMMON STOCK

(Title of Class of Securities)

37250U201

(CUSIP Number)

December 31, 2010

(Date of Event which Requires Filing of Statement)

Check the appropriate box to designate the Rule pursuant to which this Schedule is filed:

[x] Rule 13d - 1(b)

Rule 13d - 1(c)

Rule 13d - 1(d)

*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 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.)

(Continued on following page(s)
Page 1 of 10 Pages

CUSIP NO. 37250U201

13G

Page 2 of 10 Pages

- 1 Name of Reporting Person
 S.S. or I.R.S. Identification No. of Above Person
 - T. ROWE PRICE ASSOCIATES, INC.

	52-0556948					
2	Check the App	ropriate Box if	a Member	of a Group*		
	NOT APPLICABLE	E			(a) (b)	
3	SEC Use Only					
4	Citizonship	r Place of Orgar				
4	MARYLAND	rrace or organ	IIZacion			
NT		Cala Vatina D				
	*		ower			
Sh	ares	527,453				
Ве	neficially 6 *	Shared Voting *	Power			
Ow	ned By Each	-0-				
Re	porting 7	Sole Dispositi	ive Power			
Рe	rson	7,638,171				
Wi	th 8	Shared Disposi	itive Powe	r		
		-0-				
9	Aggregate Amo	unt Beneficially	y Owned by	Each Report	ing Person	
	7,638,171					
10	Check Box if Shares*	the Aggregate An	nount in R	ow (9) Exclu	des Certain	
	NOT APPLICABLE	E				
11	1 Percent of Class Represented by Amount in Row 9					
	17.7%					
12	Type of Repor	ting Person*				
		SEE INSTRUCTION hares reported i reported		and 6 are a	lso	
CU	SIP NO. 37250U	201	13G	Page 3 o	f 10 Pages	
1	Name of Reports.s. or I.R.S	ting Person . Identification	n No. of Al	oove Person		
	T. ROWE PRICE 52-1575325	SMALL CAP VALUE	E FUND, IN	С.		

2 Check the Appropriate Box if a Member of a Group*

(a) ____

	NOT APPLICAE	BLE				(b)
3	SEC Use Only	7				
4	Citizenship	or	Place of Organ	nization		
	Maryland					
Nun	mber of	5 * *	Sole Voting Po	ower		
Sha	ares		3,273,690			
Ber	neficially	6 * *	Shared Voting	Power		
Owr	ned By Each		NONE			
Rep	porting	7	Sole Disposit:	ive Power		
Per	rson		NONE			
Wit	h	8	Shared Disposi	itive Powe	r	
			NONE			
9	Aggregate Am	nour	nt Beneficially	y Owned by	Each Reporting	ng Person
	3,273,690					
10	O Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares*					
	NOT APPLICAE	BLE				
11 Percent of Class Represented by Amount in Row 9						
	7.5%					
12	12 Type of Reporting Person*					
	IV	* 01	E INCEDIOTION	DEEODE EI	TITMC OUT!	
*SEE INSTRUCTION BEFORE FILLING OUT! **The aggregate amount reported on this page is also included in the aggregate amount reported by T. Rowe Price Associates, Inc. on page 2 of this Schedule 13G.						
CUS	SIP NO. 37250)U2()1	13G	Page 4 of	10 Pages
1	Name of Reporting Person S.S. or I.R.S. Identification No. of Above Person					
	T. ROWE PRIC 52-1622210	CE S	SMALL CAP STOC	K FUND, IN	C.	
2	Check the Ap	Check the Appropriate Box if a Member of a Group*				
	NOT APPLICAE	BLE				(a) (b)
3	SEC Use Only	7				

4 Citizenship or Place of Organization Maryland Number of 5 Sole Voting Power 3,424,706 Shares Beneficially 6 Shared Voting Power Owned By Each NONE 7 Sole Dispositive Power Reporting Person NONE With 8 Shared Dispositive Power NONE 9 Aggregate Amount Beneficially Owned by Each Reporting Person 3,424,706 10 Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares* NOT APPLICABLE 11 Percent of Class Represented by Amount in Row 9 7.9% 12 Type of Reporting Person* IV *SEE INSTRUCTION BEFORE FILLING OUT! **The aggregate amount reported on this page is also included in the aggregate amount reported by T. Rowe Price Associates, Inc. on page 2 of this Schedule 13G. SCHEDULE 13G PAGE 5 OF 10 Pages Item 1(a) Name of Issuer: Reference is made to page 1 of this Schedule 13G Item 1(b) Address of Issuer's Principal Executive Offices: 909 FANNIN, STE 1850, HOUSTON, TX 77010 Item 2(a) Name of Person(s) Filing: (1) T. Rowe Price Associates, Inc. ("Price Associates") (2) T. Rowe Price Small-Cap Value Fund, Inc.

(3) T. Rowe Price Small-Cap Stock Fund, Inc.

X Attached as Exhibit A is a copy of an agreement between the Persons Filing (as specified hereinabove) that this Schedule 13G is being filed on behalf of each of them.

Item 2(b) Address of Principal Business Office:

100 E. Pratt Street, Baltimore, Maryland 21202

Item 2(c) Citizenship or Place of Organization:

- (1) Maryland
- (2) Maryland
- (3) Maryland

Item 2(d) Title of Class of Securities:

Reference is made to page 1 of this Schedule 13G

Item 2(e) CUSIP Number: 37250U201

Item 3 The person filing this Schedule 13G is an:

X Investment Adviser registered under Section 203 of the Investment Advisers Act of 1940

X Investment Company registered under Section 8 of the Investment Company Act of 1940

X Investment Company registered under Section 8 of the Investment Company Act of 1940

CUSIP 37250U201
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Item 4 Ownership

Outstanding
And
Beneficially
Units Owned Directly
Deemed Subject to
Beneficially Warrants &
Owned Conversion
Directly Privileges Total

Deemed

(1) WITH RESPECT TO
 PRICE ASSOCIATES
 (includes shares
 reported in
 (2) below):

(a) Amount
Beneficially

Owned 4,296,390 3,341,781 7,638,171

	(b)		cent of			. 17.7%
	(c)	uni to suc	ber of ts as which h son has:			
		(i)	*sole power to vote or to direct			
	(ii)	<pre>the vote *shared power to vote or to direct</pre>	364 , 890	162,563	527,453
			the vote	-0-	-0-	-0-
	(i	ii)	*sole power to dispose or to direct the disposition of	4,296,390	3,341,781	7,638,171
			*shared power to dispose or to direct the disposition	0	0	0
(2)			of SPECT TO Price Small Ca	-0- p Value Fund,	-0- CUSIP 37250 Inc. Page 7 of 1	
				Units Deemed Beneficially Owned Directly	Deemed Outstanding And Beneficially Owned Directly Subject to Warrants & Conversion Privileges	Total
	(a)		unt eficially ed	1,810,000	1,463,690	3,273,690
	(b)		cent of			. 7.5%
	(c)	(c) Number of units as to which such person has				
		(i)	*sole power to vote or to direct the vote	1,810,000	1,463,690	3,273,690

(ii)	*shared power to vote or to direct			
	the vote	-0-	-0-	-0-
(iii)	*sole power to dispose or to direct the disposition			
(iv)	of *shared power to dispose or to direct the disposition	-0-	-0-	-0-
	of	-0-	-0-	-0-
subcategory (3) WITH RE	rted in subcated (iii) or (iv). SPECT TO Price Small Cap		CUSIP 3725	50U201
		Units Deemed Beneficially	Deemed Outstanding And Beneficially Owned Directl Subject to Warrants &	
		Owned	Conversion	T-+-1
		Directly	Privileges	Total
Own (b) Per	unt eficially ed	1,893,500	1,531,206	3,424,706
(c) Num uni to suc				
(i)	*sole power to vote or to direct the vote	1,893,500	1,531,206	3,424,706
(ii)	*shared power to vote or to direct the vote	-0-	-0-	-0-
(iii)	*sole power to dispose or to direct the disposition			
	of	-0-	-0-	-0-

(iv) *shared power
 to dispose or
 to direct the
 disposition
 of

-0- -0- -0-

*Units reported in subcategories (i) and (ii) are also included in subcategory (iii) or (iv).

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Item 5 Ownership of Five Percent or Less of a Class.

X Not Applicable.

This statement is being filed to report the fact that, as of the date of this report, the reporting person(s) has (have) ceased to be the beneficial owner of more than five percent of the class of securities.

- - (1) Price Associates does not serve as custodian of the assets of any of its clients; accordingly, in each instance only the client or the client's custodian or trustee bank has the right to receive dividends paid with respect to, and proceeds from the sale of, such securities.

The ultimate power to direct the receipt of dividends paid with respect to, and the proceeds from the sale of, such securities, is vested in the individual and institutional clients which Price Associates serves as investment adviser. Any and all discretionary authority which has been delegated to Price Associates may be revoked in whole or in part at any time

Except as may be indicated if this is a joint filing with one of the registered investment companies sponsored by Price Associates which it also serves as investment adviser ("T. Rowe Price Funds"), not more than 5% of the class of such securities is owned by any one client subject to the investment advice of Price Associates.

- (2) With respect to securities owned by any one of the T. Rowe Price Funds, only State Street Bank and Trust Company, as custodian for each of such Funds, has the right to receive dividends paid with respect to, and proceeds from the sale of, such securities. No other person is known to have such right, except that the shareholders of each such Fund participate proportionately in any dividends and distributions so paid.
- Item 7 Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company.

Not Applicable.

Item 8 Identification and Classification of Members of the Group.

Not Applicable.

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Pages

Item 9 Notice of Dissolution of Group.

Not Applicable.

Item 10 Certification.

By signing below I (we) certify that, to the best of my (our) knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purpose or effect. T. Rowe Price Associates, Inc. hereby declares and affirms that the filing of Schedule 13G shall not be construed as an admission that Price Associates is the beneficial owner of the securities referred to, which beneficial ownership is expressly denied.

Signature.

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

Dated: February 14, 2011 Dated: February 14, 2011

T. ROWE PRICE ASSOCIATES, INC.

T. ROWE PRICE SMALL CAP VALUE FUND, INC.

By: /s/ David Oestreicher
David Oestreicher,
Vice President

By: /s/ David Oestreicher
David Oestreicher,
Vice President

Dated: February 14, 2011

T. ROWE PRICE SMALL CAP STOCK FUND, INC.

By: /s/ David Oestreicher
David Oestreicher,
Vice President

Note: This Schedule 13G, including all exhibits, must be filed with the Securities and Exchange Commission, and a copy hereof must be sent to the issuer by registered or certified mail not later than February 14th following

the calendar year covered by the statement or within the time specified in Rule 13d-1(b)(2), if applicable. 12/31/2010 EXHIBIT A

AGREEMENT

JOINT FILING OF SCHEDULE 13G

T. Rowe Price Associates, Inc. (an investment adviser registered under the Investment Advisers Act of 1940), T. Rowe Price Small Cap Value Fund, Inc. and T. Rowe Price Small Cap Stock Fund, Inc., all Maryland corporations, hereby agree to file jointly the statement on Schedule 13G to which this Agreement is attached, and any amendments thereto which may be deemed necessary, pursuant to Regulation 13D-G under the Securities Exchange Act of 1934.

It is understood and agreed that each of the parties hereto is responsible for the timely filing of such statement and any amendments thereto, and for the completeness and accuracy of the information concerning such party contained therein, but such party is not responsible for the completeness or accuracy of information concerning the other party unless such party knows or has reason to believe that such information is inaccurate.

It is understood and agreed that a copy of this Agreement shall be attached as an exhibit to the statement on Schedule 13G, and any amendments hereto, filed on behalf of each of the parties hereto.

Dated: February 14, 2011 Dated: February 14, 2011

T. ROWE PRICE ASSOCIATES, INC.

T. ROWE PRICE SMALL CAP VALUE FUND, INC.

By: /s/ David Oestreicher
David Oestreicher,
Vice President

By: /s/ David Oestreicher
David Oestreicher,
Vice President

Dated: February 14, 2011

T. ROWE PRICE SMALL CAP STOCK FUND, INC.

By: /s/ David Oestreicher
David Oestreicher,
Vice President