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



FORM 8-K Current Report

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): February 10, 2010

CATERPILLAR INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation)

1-768 (Commission File Number) 37-0602744 (IRS Employer Identification No.)

100 NE Adams Street, **Peoria**, **Illinois** (Address of principal executive offices)

61629 (Zip Code)

Registrant's telephone number, including area code: (309) 675-1000

Former name or former address, if changed since last report: N/A

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 230.425)
Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain officers.

(b) Resignation of Gail D. Fosler and John R. Brazil from the Caterpillar Inc. Board of Directors

On or about November 3, 2009, Gail D. Fosler announced she was resigning as President of The Conference Board, effective December 31, 2009. On November 10, 2009, Ms. Folser submitted a letter of resignation from her position as a director of Caterpillar Inc.'s (the "Company") Board of Directors (the "Board"). The Company's Guidelines on Corporate Governance Issues ("Guidelines") require a director to tender his or her resignation upon a significant change in business or personal circumstances. On February 10, 2010, the Board accepted Ms. Fosler's resignation, effective as of the expiration of her term as a Class I director on the date of the Company's annual shareholders meeting in 2011.

Ms. Fosler joined the Board on January 1, 2003 and served on the Public Policy Committee (2003 – June 2006), Compensation Committee (2003 – June 2006), Governance Committee (July 2006 – August 2009) and Audit Committee (August 2009 – present). In her role as a director, Ms. Fosler provided an international macroeconomic perspective and helped shape important Company initiatives. Her diverse views, and insight into trends and initiatives of the global business community through her leadership of The Conference Board, contributed to the Board throughout her tenure as a director.

Ms. Fosler is also a director of Baxter International Inc.

On November 19, 2009, John R. Brazil informed the Board that he would be retiring as President of Trinity University in January 2010. At that time, Mr. Brazil submitted a letter of resignation from his position as a director of the Company to be considered by the Board in accordance with the Company's Guidelines. On February 10, 2010, the Board accepted Mr. Brazil's resignation, effective as of the expiration of Mr. Brazil's term as a Class I director on the date of the Company's annual shareholders meeting in 2011.

Mr. Brazil joined the Board on October 14, 1998 and served on the Governance Committee (1998 – 2000), Public Policy Committee (2001 – June 2006), Audit Committee (1998 – 2000 and July 2006 – June 2009) and Compensation Committee (2001 – June 2006 and June 2009 to present). In his role as a director, Mr. Brazil contributed to the resolution of important policy issues. His relationship with, and insight into, the higher-education community and system helped the Company develop its recruiting processes and its internal training and continuing education function.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

CATERPILLAR INC.

By: /s/ James B. Buda

Dated: February 12, 2010 James B. Buda

Vice President, General Counsel and Secretary

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