

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF  
SECURITIESFiled pursuant to Section 16(a) of the Securities Exchange Act of 1934  
or Section 30(h) of the Investment Company Act of 1940

|  |  |  |   |
|--|--|--|---|
| 1. Name and Address of Reporting Person*<br><u>MONAGLE DJ III</u><br><br>(Last) (First) (Middle)<br><u>MINERALS TECHNOLOGIES INC.</u><br><u>405 LEXINGTON AVENUE</u><br><br>(Street)<br><u>NEW YORK NY 10174</u><br><br>(City) (State) (Zip) | 2. Date of Event Requiring Statement (Month/Day/Year)<br><u>01/02/2008</u> | 3. Issuer Name and Ticker or Trading Symbol<br><u>MINERALS TECHNOLOGIES INC [ MTX ]</u>  |   |
|  |  | 4. Relationship of Reporting Person(s) to Issuer (Check all applicable)<br>Director 10% Owner<br><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)<br><u>Vice President</u> | 5. If Amendment, Date of Original Filed (Month/Day/Year)<br><br>6. Individual or Joint/Group Filing (Check Applicable Line)<br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br>Form filed by More than One Reporting Person |

## Table I - Non-Derivative Securities Beneficially Owned

| 1. Title of Security (Instr. 4) | 2. Amount of Securities Beneficially Owned (Instr. 4) | 3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5) | 4. Nature of Indirect Beneficial Ownership (Instr. 5) |
|---------------------------------|---|--|---|
| Common Stock                    | 149   | D  |   |
| Common Stock                    | 49 <sup>(1)</sup>                                     | I  | By 401(k) Plan  |

Table II - Derivative Securities Beneficially Owned  
(e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 4) | 2. Date Exercisable and Expiration Date (Month/Day/Year) |                 | 3. Title and Amount of Securities Underlying Derivative Security (Instr. 4) |                            | 4. Conversion or Exercise Price of Derivative Security | 5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5) | 6. Nature of Indirect Beneficial Ownership (Instr. 5) |
|--|--|-----------------|---|----------------------------|--|--|---|
|  | Date Exercisable   | Expiration Date | Title   | Amount or Number of Shares |  |  |   |
| Employee Stock Option (Right to Buy)       | (2)  | 02/25/2014      | Common Stock  | 750                        | 53.89  | D  |   |
| Employee Stock Option (Right to Buy)       | (3)  | 01/17/2016      | Common Stock  | 1,000                      | 56.53  | D  |   |
| Employee Stock Option (Right to Buy)       | (4)  | 04/26/2016      | Common Stock  | 1,100                      | 59.33  | D  |   |
| Employee Stock Option (Right to Buy)       | (5)  | 04/25/2017      | Common Stock  | 1,100                      | 64.61  | D  |   |
| Deffered Restricted Stock Units ("DRSUs")  | (6)  | (6)             | Common Stock  | 466                        | (7)  | D  |   |
| DRSUs                                      | (8)  | (8)             | Common Stock  | 700                        | (7)  | D  |   |

## Explanation of Responses:

- Mr. Monagle has 49 shares of Minerals Technologies Inc. stock under the Company's 401(k) Plan. The information in this report is based on a plan statement dated as of January 9, 2008.
- Mr. Monagle was granted 3,000 options on February 25, 2004, vesting in four equal annual installments beginning on February 25, 2005. Mr. Monagle exercised his right to buy 2,250 shares.
- Mr. Monagle was granted 1,500 options on January 17, 2006, vesting in three equal annual installments beginning on January 17, 2007. Mr. Monagle exercised his right to buy 500 shares.
- The options vest in three equal annual installments beginning on April 26, 2007.
- The options vest in three equal annual installments beginning on April 25, 2008.
- Mr. Monagle was granted 700 DRSUs on April 26, 2006, vesting in three equal annual installments beginning on April 26, 2007. Vested shares are delivered to the reporting person upon vesting. Accordingly, the first installment was delivered to Mr. Monagle on April 26, 2007.
- Each DRSU is the economic equivalent of one share of Minerals Technologies Inc. Common Stock.
- DRSUs vest in three equal annual installments beginning on April 25, 2008. Vested shares will be delivered Mr. Monagle upon vesting.

## Remarks:

Laszlo Serester for D.J.  
Monagle III01/10/2008

\*\* Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 5 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.