

# FORM 4

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

|  |           |
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| OMB APPROVAL                                   |           |
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

## STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

| 1. Name and Address of Reporting Person <sup>*</sup><br>Boor William C |                                      | 2. Issuer Name and Ticker or Trading Symbol<br>CLIFFS NATURAL RESOURCES INC.<br>[CLF]   |                                | 5. Relationship of Reporting Person(s) to Issuer<br>(Check all applicable)<br><input type="checkbox"/> Director <input type="checkbox"/> 10% Owner<br><input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below)<br>Sr. Vice Pres., Bus. Devel. |   |            |   |  |   |
|--|--------------------------------------|---|--------------------------------|--|---|------------|---|--|---|
| (Last) (First) (Middle)<br>200 PUBLIC SQUARE, SUITE 3300               |                                      | 3. Date of Earliest Transaction (Month/Day/Year)<br>03/08/2010                          |                                |  |   |            |   |  |   |
| (Street)<br>CLEVELAND, OH 44114-2315                                   |                                      | 4. If Amendment, Date Original Filed(Month/Day/Year)                                    |                                | 6. Individual or Joint/Group Filing (Check Applicable Line)<br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br><input type="checkbox"/> Form filed by More than One Reporting Person   |   |            |   |  |   |
| (City) (State) (Zip)   |                                      | <b>Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned</b> |                                |  |   |            |   |  |   |
| 1. Title of Security (Instr. 3)  | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year)                                      | 3. Transaction Code (Instr. 8) |  | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |            | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|  |                                      |   | Code                           | V  | Amount  | (A) or (D) | Price   |  |   |
| Common Stock   | 03/08/2010                           |   | A <sup>(1)</sup>               |  | 2,380   | A          | \$ 0  | 25,656.2775 <sup>(2)</sup>                               | D   |
| Common Stock   |                                      |   |                                |  |   |            |   | 16,577   | I<br>VNQDC <sup>(3)</sup>                             |

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

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**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned**  
(e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | 6. Date Exercisable and Expiration Date (Month/Day/Year) |                 | 7. Title and Amount of Underlying Securities (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--|--|--------------------------------------|--|--------------------------------|---|--|-----------------|---|--|--|--|--|
|  |  |                                      |  |                                |   | Date Exercisable   | Expiration Date |   |  |  |  |  |
|  |  |                                      |  | Code                           | V   | (A)  | (D)             |   |  |  |  |  |

## Reporting Owners

| Reporting Owner Name / Address  | Relationships |           |                             |       |
|---|---------------|-----------|-----------------------------|-------|
|   | Director      | 10% Owner | Officer                     | Other |
| Boor William C<br>200 PUBLIC SQUARE<br>SUITE 3300<br>CLEVELAND, OH 44114-2315 |               |           | Sr. Vice Pres., Bus. Devel. |       |

## Signatures

|   |  |            |
|---|--|------------|
| Traci L. Forrester by Power of Attorney     |  | 03/10/2010 |
| <sup>**</sup> Signature of Reporting Person |  | Date       |

## Explanation of Responses:

\* If the form is filed by more than one reporting person, *see* Instruction 4(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).

(1) Reflects the number of restricted stock units granted to the Reporting Person on March 8, 2010 for the Performance Period January, 2010 to December, 2012.

The Board of Directors of Cliffs Natural Resources Inc. (the "Company") declared a dividend of \$0.0875 per share, payable to all holders of record as of February 16, 2010

(2) of common stock payable on March 1, 2010. The amount shown reflects 7.0166 shares credited to the Reporting Person pursuant to the Company's Dividend Reinvestment and Stock Purchase Plan.

(3) Held for the benefit of the Reporting Person by the Cliffs Natural Resources Inc. 2005 Voluntary Non-Qualified Deferred Compensation Plan (VNQDC).

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

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