

Boor William C
Form 4
May 25, 2010

FORM 4

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

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, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
Boor William C

2. Issuer Name and Ticker or Trading Symbol
CLIFFS NATURAL RESOURCES INC. [CLF]

5. Relationship of Reporting Person(s) to Issuer
(Check all applicable)
 Director 10% Owner
 Officer (give title below) Other (specify below)
Sr. Vice Pres., Bus. Devel.

(Last) (First) (Middle)
200 PUBLIC SQUARE, SUITE 3300
(Street)

3. Date of Earliest Transaction (Month/Day/Year)
05/21/2010

CLEVELAND, OH 44114-2315

(City) (State) (Zip)

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

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 Ownership (Instr. 4)
				Code V Amount (D) Price			
Common Stock	05/21/2010		F ⁽¹⁾	1,064 D \$ 50.47	15,915.2775	D	
Common Stock					16,599 ⁽²⁾	I	VNQDC

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

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SEC 1474 (9-02)

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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 Owned Following Reporting Transaction (Instr. 6)
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Reporting Owners

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

Signatures

Traci L. Forrester by Power of Attorney
05/25/2010

__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) Surrender of shares in payment of tax liability incurred on May 21, 2010, the date of restricted stock vesting to the Reporting Person.
- (2) Balance shown reflects 22 shares acquired March 1, 2010 pursuant to the dividend reinvestment feature of the Cliffs Natural Resources Inc. 2005 Voluntary Non-Qualified Deferred Compensation Plan ("VNQDC") to shareholders of record as of February 12, 2010.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.