

CLIFFS NATURAL RESOURCES INC.

Reported by
BOOR WILLIAM C

FORM 4

(Statement of Changes in Beneficial Ownership)

Filed 05/25/10 for the Period Ending 05/21/10

Address	200 PUBLIC SQUARE STE. 3300 CLEVELAND, OH 44114-2315
Telephone	216-694-5700
CIK	0000764065
Symbol	CLF
SIC Code	1000 - Metal Mining
Industry	Metal Mining
Sector	Basic Materials
Fiscal Year	12/31

FORM 4

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

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

OMB APPROVAL
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**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(f) of the
Investment Company Act of 1940

1. Name and Address of Reporting Person *			2. Issuer Name and Ticker or Trading Symbol			5. Relationship of Reporting Person(s) to Issuer (Check all applicable)		
Boor William C			CLIFFS NATURAL RESOURCES INC. [CLF]			<input type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) Sr. Vice Pres., Bus. Devel.		
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (MM/DD/YYYY)					
			5/21/2010					
200 PUBLIC SQUARE, SUITE 3300			4. If Amendment, Date Original Filed (MM/DD/YYYY)			6. Individual or Joint/Group Filing (Check Applicable Line)		
(Street)						<input checked="" type="checkbox"/> Form filed by One Reporting Person		
CLEVELAND, OH 44114-2315						<input type="checkbox"/> Form filed by More than One Reporting Person		
(City) (State) (Zip)								

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

1. Title of Security (Instr. 3)	2. Trans. Date	2A. Deemed Execution Date, if any	3. Trans. 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	5/21/2010		F	(1)	1064	D	\$50.47	15915.2775	D	
Common Stock								16599 (2)	I	VNQDC

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

1. Title of Derivate Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Trans. Date	3A. Deemed Execution Date, if any	4. Trans. 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		7. Title and Amount of Securities Underlying Derivative Security (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)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				

Explanation of Responses:

- (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.

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

5/25/2010

** 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 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).

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 control number.