

CLIFFS NATURAL RESOURCES INC.

Reported by
CALFEE WILLIAM R

FORM 4

(Statement of Changes in Beneficial Ownership)

Filed 03/05/10 for the Period Ending 03/03/10

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)		
CALFEE WILLIAM R			CLIFFS NATURAL RESOURCES INC. [CLF]			<input type="checkbox"/> Director <input type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Exec. V.P. Comm. N.Amer. Iron		
(Last)	(First)	(Middle)	3. Date of Earliest Transaction (MM/DD/YYYY)			<input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) Exec. V.P. Comm. N.Amer. Iron		
1100 SUPERIOR AVENUE, 15TH FLOOR			3/3/2010					
(Street)			4. If Amendment, Date Original Filed (MM/DD/YYYY)			6. Individual or Joint/Group Filing (Check Applicable Line)		
CLEVELAND, OH 44114						<input checked="" type="checkbox"/> Form filed by One Reporting Person <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	3/3/2010		A (1)		16830	A	\$53.60	58038	D	
Common Stock	3/3/2010		F (2)		6051	D	\$53.60	51987	D	
Common Stock								39968	I	By VNQDC (3)

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				
Retention Units 2007-2009	(4)	3/3/2010		D		1980		(5)	(5)	Common Shares	1980	\$46.09	0	D	

Explanation of Responses:

- (1) Reflects a payout in Common Stock of Performance Shares earned under the 2007 Cleveland-Cliffs Inc. Incentive Equity Plan (as Amended December 31, 2008) (Equity Plan) for the 2007-2009 Performance Period.
- (2) Surrender of Performance Shares represented in payment of the related tax liability incurred by the reporting person.
- (3) Held for the benefit of the Reporting Person by the Cliffs Natural Resources Inc. 2005 Voluntary Non-Qualified Deferred Compensation Plan (VNQDC).
- (4) Convertible into Common Shares on a 1-for-1 basis.
- (5) Represents a payout of retention units to the Reporting Person under the 2007 Equity Plan covering the period of January 1, 2007 to December 31, 2009 (Retention Period). Retention units are paid out to the Reporting Person in cash based on the market value price of

the Common Shares of the Issuer on the last day of the Retention Period.

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
CALFEE WILLIAM R 1100 SUPERIOR AVENUE 15TH FLOOR CLEVELAND, OH 44114			Exec. V.P. Comm. N.Amer. Iron	

Signatures

Traci L. Forrester by Power of Attorney

3/5/2010

** 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.

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