As filed with the Securities and Exchange Commission on April 27, 2016

Registration No	

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

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Cliffs Natural Resources Inc.

(Exact Name of Registrant as Specified in Its Charter)

Ohio 34-1464672

(State or Other Jurisdiction of Incorporation or Organization)

(I.R.S. Employer Identification No.)

200 Public Square, Suite 3300, Cleveland, Ohio 44114-2315 (Address of Principal Executive Offices Including Zip Code)

Cliffs Natural Resources Inc. Amended and Restated 2014 Nonemployee Directors' Compensation Plan

(Full Title of the Plan)

James D. Graham, Esq.
Executive Vice President, Chief Legal Officer and Secretary
Cliffs Natural Resources Inc.
200 Public Square, Suite 3300
Cleveland, Ohio 44114-2315
(216) 694-5700

(Name and Address, and Telephone Number, including Area Code, of Agent For Service)

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	X	Accelerated filer	
Non-accelerated filer		Smaller reporting company	
(Do not check if a smaller reporting company)			

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered ⁽¹⁾	Proposed Maximum Offering Price Per Share ⁽²⁾	Proposed Maximum Aggregate Offering Price ⁽²⁾	Amount of Registration Fee
Common Shares, \$0.125 par value per share	750,000	\$4.37	\$3,273,750.00	\$329.67

- (1) Represents common shares, par value \$0.125 per share ("Common Shares"), of Cliffs Natural Resources Inc. (the "Registrant") issuable pursuant to the Cliffs Natural Resources Inc. Amended and Restated 2014 Nonemployee Directors' Compensation Plan (the "Plan") being registered hereon. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement also covers such additional Common Shares as may become issuable pursuant to the anti-dilution provisions of the Plan.
- (2) Estimated solely for the purposes of determining the amount of the registration fee, pursuant to paragraphs (c) and (h) of Rule 457 under the Securities Act, on the basis of the average of the high and low sale prices of the Common Shares on the New York Stock Exchange on April 22, 2016, a date that is within five business days prior to filing.

EXPLANATORY NOTE

The Registrant hereby files this Registration Statement on Form S-8 to register an additional 750,000 Common Shares under the Plan for which a previously filed registration statement on Form S-8 relating to the Plan is effective. Pursuant to General Instruction E to Form S-8, this Registration Statement incorporates by reference the contents of the Registration Statement on Form S-8 (Registration No. 333-197688) filed by the Registrant on July 29, 2014, including all attachments and exhibits thereto, except to the extent supplemented, amended or superseded by the information set forth herein.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The Registrant is subject to the informational and reporting requirements of Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, as amended (the "*Exchange Act*"), and, in accordance therewith, files reports, proxy statements and other information with the Securities and Exchange Commission (the "*Commission*"). The following documents, which are on file with the Commission, are incorporated into this Registration Statement by reference:

- (a) The Registrant's Annual Report on Form 10-K for the year ended December 31, 2015 (Commission File No. 001-08944), filed with the Commission on February 24, 2016;
- (b) The Registrant's Current Reports on Form 8-K (Commission File No. 001-08944), filed with the Commission on January 22, 2016, February 8, 2016 and March 2, 2016; and
- (c) The description of the Common Shares contained in the Current Report on Form 8-K/A (Commission File No. 001-08944) filed with the Commission on May 21, 2008, and all amendments and reports filed with the Commission for the purpose of updating such description.

All documents filed by the Registrant with the Commission pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act subsequent to the effective date of this Registration Statement and prior to the filing of a post-effective amendment that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold, will be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of filing of such documents. Any statement contained in any document incorporated or deemed to be incorporated by reference herein will be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded will not be deemed, except as modified or superseded, to constitute a part of this Registration Statement.

Item 8. Exhibits

Exhibit Number	Exhibit Description
4.1	Third Amended Articles of Incorporation of Cliffs (as filed with the Secretary of State of the State of Ohio on May 13, 2013 (filed as Exhibit 3.1 to Cliffs' Form 8-K on May 13, 2013 and incorporated herein by reference)
4.2	Regulations of Cleveland-Cliffs Inc. (filed as Exhibit 3.2 to Cliffs' Form 10-K for the period ended December 31, 2011 and incorporated herein by reference)
4.3	Form of Common Share Certificate (filed as Exhibit 4.1 to Cliffs' Form 10-Q for the period ended September 30, 2014 and incorporated herein by reference)
4.4	Cliffs Natural Resources Inc. Amended and Restated 2014 Nonemployee Directors' Compensation Plan (filed as Annex A to Cliffs' Definitive Proxy Statement on Schedule 14A, filed March 11, 2016 and incorporated herein by reference)
5.1	Opinion of Jones Day
23.1	Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm
23.2	Consent of Jones Day (included in Exhibit 5.1)
24.1	Power of Attorney

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cleveland, State of Ohio, on this 27th day of April, 2016.

CLIFFS NATURAL RESOURCES INC.

By: /s/ James D. Graham

James D. Graham Executive Vice President, Chief Legal Officer and Secretary

Signature President, Chief Executive Officer and Director (Principal L. Goncalves Executive Officer) Executive Vice President and Chief Financial Officer P. K. Tompkins (Principal Financial Officer) Vice President, Corporate Controller, Treasurer and Chief T. K. Flanagan Accounting Officer (Principal Accounting Officer) J. T. Baldwin Director R. P. Fisher, Jr. Director S. M. Green Director

J. A. Rutkowski, Jr.

*

J. S. Sawyer

Director

J. S. Sawyer Director

M. D. Siegal Director

G. Stoliar Director

D. C. Taylor

* The undersigned, by signing his name hereto, does hereby sign this Registration Statement on Form S-8 on behalf of each of the officers and directors of the Registrant identified above pursuant to a Power of Attorney executed by the officers and directors identified above, which Power of Attorney is filed with this Registration Statement on Form S-8 as Exhibit 24.1.

Director

DATED: April 27, 2016 By: /s/ James D. Graham

James D. Graham, attorney-in-fact

EXHIBIT INDEX

Exhibit Number	Exhibit Description
4.1	Third Amended Articles of Incorporation of Cliffs (as filed with the Secretary of State of the State of Ohio on May 13, 2013 (filed as Exhibit 3.1 to Cliffs' Form 8-K on May 13, 2013 and incorporated herein by reference)
4.2	Regulations of Cliffs (filed as Exhibit 3.2 to Cliffs' Form 10-K for the period ended December 31, 2011 and incorporated herein by reference)
4.3	Form of Common Share Certificate (filed as Exhibit 4.1 to Cliffs' Form 10-Q for the period ended September 30, 2014 and incorporated herein by reference)
4.4	Cliffs Natural Resources Inc. Amended and Restated 2014 Nonemployee Directors' Compensation Plan (filed as Annex A to Cliffs' Definitive Proxy Statement on Schedule 14A, filed March 11, 2016 and incorporated herein by reference)
5.1	Opinion of Jones Day
23.1	Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm
23.2	Consent of Jones Day (included in Exhibit 5.1)
24.1	Power of Attorney

JONES DAY

NORTH POINT • 901 LAKESIDE AVENUE • CLEVELAND, OHIO 44114.1190 TELEPHONE: +1.216.586.3939 • FACSIMILE: +1.216.579.0212

April 27, 2016

Cliffs Natural Resources Inc. 200 Public Square, Suite 3300 Cleveland, Ohio 44114-2315

Re: Registration Statement on Form S-8 Filed by Cliffs Natural Resources Inc.

Ladies and Gentlemen:

We have acted as counsel for Cliffs Natural Resources Inc., an Ohio corporation (the "Company"), in connection with the Cliffs Natural Resources Inc. Amended and Restated 2014 Nonemployee Directors' Compensation Plan (the "Plan"). In connection with the opinion expressed herein, we have examined such documents, records and matters of law as we have deemed relevant or necessary for purposes of such opinion. Based on the foregoing, and subject to the further limitations, qualifications and assumptions set forth herein, we are of the opinion that the 750,000 common shares (the "Shares"), par value \$0.125 per share, of the Company that may be issued or delivered and sold pursuant to the Plan and the authorized forms of restricted share, restricted stock unit or other applicable award agreements thereunder (the "Award Agreements") will be, when issued or delivered and sold in accordance with the Plan and the Award Agreements, validly issued, fully paid and nonassessable, provided that the consideration for the Shares is at least equal to the stated par value thereof.

The opinion expressed herein is limited to the laws of the State of Ohio, as currently in effect, and we express no opinion as to the effect of the laws of any other jurisdiction on the opinion expressed herein. In addition, we have assumed that the resolutions authorizing the Company to issue or deliver and sell the Shares pursuant to the Plan and the Award Agreements will be in full force and effect at all times at which the Shares are issued or delivered and sold by the Company, and that the Company will take no action inconsistent with such resolutions. In rendering the opinion above, we have assumed that each award under the Plan will be approved by the Board of Directors of the Company or an authorized committee of the Board of Directors.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement on Form S-8 filed by the Company to effect the registration of the Shares under the Securities Act of 1933 (the "Act"). In giving such consent, we do not thereby admit that we are included in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

Very truly yours,

/s/ Jones Day

ALKHOBAR • AMSTERDAM • ATLANTA • BEIJING • BOSTON • BRUSSELS • CHICAGO • CLEVELAND • COLUMBUS • DALLAS DUBAI • DÜSSELDORF • FRANKFURT • HONG KONG • HOUSTON • IRVINE • JEDDAH • LONDON • LOS ANGELES • MADRID MEXICO CITY • MIAMI • MILAN • MOSCOW • MUNICH • NEW YORK • PARIS • PERTH • PITTSBURGH • RIYADH • SAN DIEGO SAN FRANCISCO • SÃO PAULO • SHANGHAI • SILICON VALLEY • SINGAPORE • SYDNEY • TAIPEI • TOKYO • WASHINGTON

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our reports dated February 24, 2016, relating to the consolidated financial statements and financial statement schedule of Cliffs Natural Resources Inc. and subsidiaries, and the effectiveness of Cliffs Natural Resources Inc.'s internal control over financial reporting, appearing in the Annual Report on Form 10-K of Cliffs Natural Resources Inc. for the year ended December 31, 2015.

/s/ Deloitte & Touche LLP

Cleveland, Ohio

April 27, 2016

REGISTRATION STATEMENT ON FORM S-8

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each of the undersigned directors and officers of Cliffs Natural Resources Inc., an Ohio corporation (the "Registrant"), does hereby constitute and appoint each of Lourenco Goncalves, P. Kelly Tompkins and James D. Graham, or any of them, each acting alone, as the true and lawful attorney-in-fact or attorneys-in-fact for each of the undersigned, with full power of substitution and resubstitution, and in the name, place and stead of each of the undersigned, to execute and file (1) one or more Registration Statements on Form S-8 (the "Form S-8 Registration Statement") with respect to the registration under the Securities Act of 1933 of the Registrant's Common Shares issuable in connection with the Cliffs Natural Resources Inc. Amended and Restated 2014 Nonemployee Directors' Compensation Plan, (2) any and all amendments, including post-effective amendments, supplements and exhibits to the Form S-8 Registration Statement and (3) any and all applications or other documents to be filed with the Securities and Exchange Commission or any state securities commission or other regulatory authority or exchange with respect to the securities covered by the Form S-8 Registration Statement, with full power and authority to do and perform any and all acts and things whatsoever necessary, appropriate or desirable to be done in the premises, or in the name, place and stead of the said director and/or officer, hereby ratifying and approving the acts of said attorneys and any of them and any such substitute.

This Power of Attorney may be executed in multiple counterparts, each of which shall be deemed an original with respect to the person executing it.

IN WITNESS WHEREOF, the undersigned have hereunto set their hands as of the 26th day of April, 2016.

/s/ L. Goncalves	/s/ P. K. Tompkins
L. Goncalves President, Chief Executive Officer and Director (Principal Executive Officer) /s/ T. K. Flanagan	P. K. Tompkins Executive Vice President and Chief Financial Officer (Principal Financial Officer)
T. K. Flanagan Vice President, Corporate Controller, Treasurer & Chief Accounting Officer (Principal Accounting Officer)	
/s/ J. T. Baldwin	/s/ R. P. Fisher, Jr.
J. T. Baldwin Director	R. P. Fisher, Jr. Director
/s/ S. M. Green	/s/ J. A. Rutkowski, Jr.
S. M. Green Director	J. A. Rutkowski, Jr. Director
/s/ J. S. Sawyer	/s/ M. D. Siegal
J. S. Sawyer Director	M. D. Siegal Director
/s/ G. Stoliar	/s/ D. C. Taylor
G. Stoliar Director	D. C. Taylor Director