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

FORM 40-F

[] Registration statement pursuant to Section 12 of the Securities Exchange Act of 1934

or

[X] Annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended December 31, 2014 Commission File Number 001-32405
NEVSUN RESOURCES LTD.

(Exact name of registrant as specified in its charter)

British Columbia

(Province or Other Jurisdiction of Incorporation or Organization)

1041 (Primary Standard Industrial Classification Code) Not Applicable (I.R.S. Employer Identification No.)

760 - 669 Howe Street, Vancouver, British Columbia, Canada V6C 0B4 (604) 623-4700

(Address and telephone number of registrant's principal executive offices)

Gibson, Dunn & Crutcher LLP 3161 Michelson Drive, Irvine, CA 92612-4412 (949) 451-4343

(Name, address and telephone number of agent for service in the United States)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of Each Class:Name of Each Exchange On Which Registered:Common shares, no par valueNYSE MKT LLC

Securities registered or to be registered pursuant to Section 12(g) of theAct: None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None

For annual reports, indicate by check mark the information filed with this form:

[X] Annual Information Form [X] Audited Annual Financial Statements At December 31, 2014, the Registrant had 199,652,802 outstanding common shares with no par value.

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the Registrant was required to file

such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes [X] No []

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interac-tive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preced-ing 12 months (or for such shorter period that the Registrant was required to submit and post such files).

Yes [] No [X]

DOCUMENTS INCORPORATED BY REFERENCE

The Annual Information Form of Nevsun Resources Ltd. (the "Registrant") for the fiscal year ended December 31, 2014 (the "Annual Information Form") is attached as Exhibit 99.1 and is incorporated herein by reference.

The audited consolidated financial statements of the Registrant for the years December 31, 2014 and 2013 (the "Financial Statements"), including the reports of the auditors with respect thereto, are attached as Exhibit 99.2 and are incorporated herein by reference.

The Registrant's management's discussion and analysis ("MD&A") for the years ended December 31, 2014 and 2013 is attached as Exhibit 99.3 and is incorporated herein by reference.

EXPLANATORY NOTE

The Registrant is a Canadian issuer eligible to file its annual report pursuant to Section 13 of the Securities Exchange Act of 1934 (the "Exchange Act") on Form 40-F. The Registrant is a "foreign private issuer" as defined in Rule 3b-4 under the Exchange Act. Accordingly, the Registrant's equity securities are exempt from Sections 14(a), 14(b), 14(c), 14(f) and 16 of the Exchange Act pursuant to Rule 3a12-3.

CAUTIONARY NOTE TO UNITED STATES INVESTORS CONCERNING DIFFERENCES IN UNITED STATES AND CANADIAN REPORTING PRACTICES

The Registrant is permitted, under a multi-jurisdictional disclosure system adopted by the United States, to prepare this annual report on Form 40-F in accordance with Canadian disclosure requirements, which are different from those of the United States. In particular, and without limiting the foregoing, all mineral resource and reserve estimates included in this report have been prepared in accordance with Canadian National Instrument 43-101 and the Canadian Institute of Mining and Metallurgy ("CIM") Classification System. These standards differ significantly from the requirements of the United States Securities and Exchange Commission (the "Commission"), and mineral resource and reserve information included herein may not be comparable to similar information concerning United States companies.

For definitions of the terms mineral reserve, mineral resource, measured mineral resource, indicated mineral resource and inferred mineral resource under CIM standards, and a summary of the differences between CIM and U.S. standards, see information contained in the section entitled "Cautionary Note to US Investors Regarding Disclosure of Mineral Reserves and Resource Estimates" on page 4, contained in Exhibit 99.1 filed herewith entitled "Annual Information Form".

A copy of this 40-F and accompanying Exhibits may be found on the Company website: www.nevsun.com.

FORWARD LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities legislation concerning anticipated developments in the Company's continuing and future operations in Eritrea and in the putative class action lawsuit, the adequacy of the Company's financial resources and financial projections. Forward-looking statements include, but are not limited to,

statements concerning or the assumptions related to estimates of capital and operating costs, the timing, nature and extent of future copper and gold production, expanding exploration licenses, the estimation of mineral reserves and resources, methodologies and models used to prepare resource and reserve estimates, the realization of mineral reserve estimates, the conversion of mineral properties to reserves and resources, the potential to expand resources, reserves and mine life, future exploration budgets, plans, targets and work programs, capital expenditures and objectives, anticipated timing of grant of permits, mining and development plans and activities, construction and production targets and timetables, grades, processing rates, life of mine, net cash flows, metal prices, exchange rates, reclamation costs, results of drill programs, dividend plans and policy, litigation matters, integration or expansion of operations, requirements for additional capital, government regulation of mining operations, environmental risks, political risks and uncertainties, unanticipated reclamation expenses, and other events or conditions that may occur in the future. Forward-looking statements are frequently, but not always, identified by words such as "expects," "anticipates," "believes," "intends," "estimates," "potential," "possible," "budget" and similar expressions, or statements that events, conditions or resu "will," "may," "could" or "should" occur or be achieved. Information concerning the interpretation of drill results and minera resource and reserve estimates also may be deemed to be forward-looking statements, as such information constitutes a prediction of what mineralization might be found to be present if and when a project is actually developed, and in the case of mineral reserves, such statements reflect the conclusion based on certain assumptions that the mineral deposit can be economically exploited.

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Forward-looking statements are statements about the future and are inherently uncertain, and actual achievements of the Registrant or other future events or conditions may differ materially from those reflected in the forward-looking statements due to a variety of risks, uncertainties and other factors, including, without limitation, those described in the Annual Information Form of the Registrant included in this report. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or intended.

The Registrant's forward-looking statements are based on the beliefs, expectations and opinions of management on the date the statements are made and the Registrant assumes no obligation to update such forward-looking statements in the future. For the reasons set forth above, investors should not place undue reliance on forward-looking statements.

MANAGEMENT REPORT ON DISCLOSURE CONTROLS AND PROCEDURES

The information contained in the "Disclosure controls and procedures", contained in Exhibit 99.3 filed herewith entitled "MD&A" is incorporated herein by reference.

MANAGEMENT REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The Registrant's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act.

The Registrant's internal control over financial reporting includes those policies and procedures that: (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Registrant's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that the Registrant's receipts and expenditures are being made only in accordance with authorizations of the Registrant's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Registrant's assets that could have a material effect on the financial statements.

With the participation of the Registrant's Chief Executive Officer and the Registrant's Chief Financial Officer, management conducted an evaluation of the effectiveness of the Registrant's internal control over financial reporting, as of December 31, 2014, based on the framework set forth in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on its evaluation under this framework, management concluded that the Registrant's internal control over financial reporting was effective as of that date.

KPMG LLP, an independent registered public accounting firm, which audited and reported on the Registrant's consolidated financial statements, has issued an attestation report on management's assessment of the effectiveness of the Registrant's internal control over financial reporting as of December 31, 2014. The attestation report is included with the Financial Statements in Exhibit 99.2.

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AUDITOR ATTESTATION

The information contained in the "Independent Auditors' Report of Registered Public Accounting Firm", contained in Exhibit 99.2 filed herewith entitled "Financial Statements" is incorporated herein by reference.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

The information contained in the "Changes in internal control over financial reporting", contained in Exhibit 99.3 filed herewith entitled "MD&A" is incorporated by reference.

AUDIT COMMITTEE AND AUDIT COMMITTEE FINANCIAL EXPERT

The information contained in the "Audit Committee Charter", "Composition of the Audit Committee", and "Pre-Approval Policies and Procedures", contained in Exhibit 99.1 filed herewith entitled "Annual Information Form" is incorporated by reference.

CODE OF ETHICS

The Registrant has adopted a code of ethics that applies to its principal executive officer, principal financial officer and principal accounting officer or persons performing similar functions. A copy of the code of ethics, as revised, is posted on the Registrant's Internet website at www.nevsun.com, and is available in print to any person without charge, upon written request to the corporate secretary of the Registrant. No waivers of the code of ethics have been granted to any principal officer of the Registrant or any person performing similar functions.

PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information contained in the "External Auditor Fees" and "Pre-Approval Policies and Procedures" contained in Exhibit 99.1 filed herewith entitled "Annual Information Form" is incorporated by reference.

OFF-BALANCE SHEET ARRANGEMENTS

The information contained in the "Off-balance sheet arrangements", contained in Exhibit 99.3 filed herewith entitled "MD&A" is incorporated by reference.

TABULAR DISCLOSURE OF CONTRACTUAL OBLIGATIONS

The information contained in the "Commitments and contractual obligations", contained in Exhibit 99.3 filed herewith entitled "MD&A" is incorporated by reference.

MINE SAFETY DISCLOSURE

The Registrant does not operate any mine in the United States, and has no mine safety incidents to report for the year ended December 31, 2014.

UNDERTAKINGS

The Registrant undertakes to make available, in person or by telephone, representatives to respond to inquiries made by the Commission staff, and to furnish promptly, when requested to do so by the Commission staff, information relating to: the securities registered pursuant to Form 40-F; the securities in relation to which the obligation to file an annual report on Form 40-F arises; or to transactions in said securities.

CONSENT TO SERVICE OF PROCESS

The Registrant has previously filed with the Commission a written consent to service of process and power of attorney on Form F-X.

SIGNATURES

Pursuant to the requirements of the Exchange Act, the Registrant certifies that it meets all of the requirements for filing on Form 40-F and has duly caused this annual report to be signed on its behalf by the undersigned, thereto duly authorized.

NEVSUN RESOURCES LTD.

By:

<u>/s/ "Clifford T. Davis</u>" Clifford T. Davis Chief Executive Officer and Director

Date:

February 25, 2015 - 5 -

EXHIBIT INDEX

The following exhibits have been filed as part of the annual report:

Exhibit Description

- 99.1 Annual Information Form of the Registrant for the year ended December 31, 2014
- 99.2 Audited Annual Financial Statements of the Registrant for the years ended December 31, 2014 and 2013
- 99.3 MD&A of the Registrant for the years ended December 31, 2014 and 2013
- 99.4 Certification of Chief Executive Officer as Required by Rule 13a-14(a) under the Exchange Act
- 99.5 Certification of Chief Financial Officer as Required by Rule 13a-14(a) under the Exchange Act
- <u>99.6</u> <u>Certificate of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section</u> <u>906 of the Sarbanes-Oxley Act of 2002</u>
- 99.7 Certificate of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906
- of the Sarbanes-Oxley Act of 2002
- 99.8 Consent of KPMG LLP
- 99.9 Consent of Qualified Person, Matt Bampton
- 99.10 Consent of Qualified Person, Paul Gribble
- 99.11 Consent of Qualified Person, Anoush Ebrahimi

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