



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-4628

December 15, 2009

Winnie Wong
Corporate Secretary
Rare Element Resources Ltd.
325 Howe St., #410
Vancouver, BC V6C 1Z7

Re: Rare Element Resources Ltd.
Form 20-F
File No. 0-53834
Filed November 17, 2009

Dear Ms. Wong:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. Provide complete responses and, where disclosure has changed, indicate precisely where in the marked version of the amendment you file we will find your responsive changes. Similarly, to the extent comments on one section apply to similar disclosure elsewhere, please make corresponding revisions to all affected disclosure. Further, please provide updated disclosure with each amendment. This will minimize the need for us to repeat similar comments.
2. The Form 20-F registration statement will become automatically effective 60 days from the date you filed it with the Commission. Upon effectiveness, you will become subject to the reporting requirements of the Securities Exchange Act of 1934. As a voluntary filing, you may withdraw the filing so that it does not become

effective in a deficient form. Please contact us if you need to discuss this alternative.

3. Please provide updated disclosure with each amendment. For example, we note various events disclosed in the notes to your financial statements not disclosed in the registration statement.
4. We note your disclosure of the acquisition of the Eden Lake REE Project in the Property, Plants, and Equipment section. Please update your disclosure to address the acquisition throughout the filing, including the potential effects on your working capital position.

Cover Page

5. We note that you checked the box indicating that you have been subject to the filing requirements of Section 12 or 15(d) of the Securities Exchange Act of 1934 for the past ninety days. Please revise your cover page to indicate that you have not been subject to the filing requirements for the past ninety days.

Introduction, page 3

6. We note your statement referring the reader “to the actual corporate documents for more complete information than may be contained in th[e] Registration Statement.” Please revise or remove any statement implying that the registration statement is incomplete.

Forward-looking Statements, and This Registration Statement Contains Forward-looking Statements...

7. You are not currently subject to the reporting requirements of Exchange Act Sections 13(a) or 15(d). Therefore, the safe harbor the Private Securities Litigation Reform Act of 1995 provides does not apply. If you retain these sections, please revise them to eliminate any suggestion that the statements to which you refer are “forward looking statements” within the meaning of federal securities law. We refer you to Exchange Act Section 21E in general and Section 21E(a)(1) in particular.

Risk Factors, page 8

8. Please include a risk factor addressing the potential effects of fluctuations in the exchange rate given its effect on you in the past.

REE Exploration Activities, page 15

9. We suggest that you present this section in chronological order, rather than reverse chronological order, for clarity.

Internal Control Over Financial Reporting, page 29

10. Your statement that your internal controls over financial reporting were effective is inconsistent with the statement that your internal controls “have an inherent weakness.” Please revise or advise.

Results of Operations, page 29

11. We note that parts of your discussion of your results of operations are prospective in nature, reflecting anticipated goals for each period and do not reflect a retroactive analysis of what occurred in the given period. Please update your discussion of your results of operations to reflect what occurred in each period instead of what the company anticipated it would accomplish in the following period.

Trend Information, page 35

12. We note that you have provided no information under this heading other than to say that there are no trends, uncertainties, demands, commitments or events that are reasonably likely to have a material effect on your operations or financial condition. The guidance in Item 5.D of Form 20-F requires that you also address such matters that would cause reported financial information not necessarily to be indicative of future operating results or financial condition.

We ask that you further consider these disclosure requirements. For example, given that you report \$581 thousand in cash exploration costs in fiscal year 2009, your disclosure on page 13 indicating that you expect to spend \$2 million on these types of costs in 2010 suggests that the related activity reported in your 2009 financial statements is not indicative of your future operating results or financial condition. If there are other aspects of your financial reporting that you expect will exhibit material change, these too should be addressed.

If you have disclosed such matters elsewhere in your filing, we suggest that you provide a concise summary under this heading and cross reference the sections where further details are presented. Please comply with this requirement.

Tabular Disclosure of Contractual Obligations, page 35

13. Provide, in the tabular format prescribed in Item 5.F of the Form 20-F, disclosure of your contractual obligations.

Directors, Senior Management, and Employees, page 37

14. Please eliminate any gaps or ambiguities regarding your officers and directors’ experience for the last five years by indicating both the month and year that the individuals served in their previous or current positions.

15. We note that your Contractor Agreement states that Mr. Ranta will devote 60% of his time to the company. Please include the amount of time Mr. Ranta and other directors and senior management will devote to the company in the event they have other commitments that would prevent them from contributing all of their time to the company.

Senior Management Compensation, page 42

16. Identify the private company by name referenced in footnote 2 to the Senior Management Compensation Table.
17. We note that Ms. Winnie Wong's compensation is included in the All Other Compensation column of Mr. Mark Brown's row in the Senior Management Compensation Table. Please include compensation paid to Mr. Wong in the row reflecting the compensation of Ms. Wong or provide an explanation as to why her compensation should be aggregated with that of Mr. Brown.

Related Party Transactions, page 50

18. Revise your disclosure to specifically identify the parties referenced in the related party transactions.

Legal/Arbitration Proceedings, page 51

19. We note your statement that the company is not involved as a plaintiff in any material proceeding or pending litigation. Please revise to indicate whether the company is not involved as a defendant in any material proceeding or pending litigation

Statement by Experts, page 59

20. Please provide the address of De Visser Gray LLP.

Financial Statements

General

21. We note your disclosure in the third paragraph on page 3 stating that you had expended \$1.6 million on "acquisition/development." Given that you have not established proven or probable reserves, as defined in Industry Guide 7, we ask that you remove the reference to development. Please also clarify in the headings of the financial statements that Rare Element is an exploration stage company.

Note 15 – Differences Between Canadian and U.S. GAAP, page 85

22. We note your disclosure on page 33, explaining that under U.S. GAAP, resource

properties are reviewed for impairment whenever circumstances change which could indicate that the carrying amount may not be recoverable.

Given that you report both current-period operating and cash flow losses and have a history of operating and cash flow losses, we would expect your policy under U.S. GAAP to require impairment testing at each period-end as long as either of these conditions persists to comply with paragraph 8(e) of SFAS 144.

23. We note your disclosure explaining that under U.S. GAAP, all exploration expenditures are expensed until an independent feasibility study has determined that the mineral rights are capable of economic commercial production. We require further details about your accounting methodology.

Under U.S. GAAP, the costs of acquiring properties and mineral rights are generally capitalized, although these costs would be subject to impairment testing, following the guidance in SFAS 144 and EITF 04-3. Under U.S. GAAP it is also important to distinguish between exploration and development costs, and to ensure correlation of these terms with your reserve findings.

The costs incurred after mineral reserves have been established are commonly developmental in nature, when they relate to constructing the infrastructure necessary to extract the reserves, preparing the mine for production, and are on this basis capitalized. On the other hand, exploratory costs are those typically associated with efforts to search for and establish mineral reserves, beyond those already found, and should be expensed as incurred, regardless of whether you have established reserves on other properties.

Please revise your disclosures under this heading and on page 33 to clarify and tell us of any revisions that you believe would be necessary for your accounting under U.S. GAAP to adhere to this guidance. We expect that you will need to differentiate between acquisition, exploration and development costs.

Engineering Comments

General

24. We note that you refer to or use the terms such as potential mineralization, drill indicated resources, measured, indicated, or inferred resources on your website. As you may know, for U.S. reporting purposes, measures of mineral reserves must be consistent with the definitions set forth in Industry Guide 7. These generally differ from measurement systems that guide the estimation of resources. If you continue to make references on your web site to reserve measures other than those recognized by the SEC, please accompany such disclosure with cautionary language comparable to the following:

“Cautionary Note to U.S. Investors - The United States Securities and Exchange Commission limits disclosure for U.S. reporting purposes to mineral deposits that a company can economically and legally extract or produce. We use certain terms on this web site, such as “reserves,” “resources,” “geologic resources,” “proven,” “probable,” “measured,” “indicated,” or “inferred,” which may not be consistent with the reserve definitions established by the SEC. U.S. investors are urged to consider closely the disclosure in our Form 20-F. You can review and obtain copies of these filings from our website at <http://www.sec.gov/edgar.shtml>.”

Please indicate the location of this disclaimer in your response.

REE Exploration Activities, pages 16 & 19

25. We understand that you are presenting your non-reserve information pursuant to the guidance in Instruction 3 to paragraph (b) (5) of Industry Guide 7. Under these circumstances, it is important to clearly distinguish between proven and probable reserves, which have a clearly defined technical, legal, and economic meaning, and non-reserve mineralization. If you choose to present such non-reserve information, please reposition this information to a separately titled section, having disclosure of your measured and indicated mineral resources, apart from your inferred mineral resources, using separate tables and narratives. In presenting this information, resources should only be reported as an “in-place” tonnage and grade, not as units of product, such as ounces of gold or pounds of copper, and not as contained mineral. The relative quality, reliability, and risk associated with your estimates should be addressed sufficiently to distinguish each mineral resource category.

Please also include cautionary disclosure – comparable to that suggested above - , prominently displayed above each table, clarifying that your mineral resources, whether measured and indicated or inferred, while disclosed pursuant to Canadian requirements, are not recognized terms within the definitions prescribed by the SEC, and are not reserves. Please emphasize the uncertainty of whether your measured and indicated mineral resources will ever be converted into reserves, and whether your inferred mineral resources will ever be upgraded into another category of resources, while specifying the particular aspects of the reserve definitions which have not been satisfied for each category of resources.

26. The cutoff grade is a critical component used to evaluate the potential of the mineral properties. Please disclose the assumed commodity prices, operating costs and recovery parameters used to determine your cutoff grade estimate. Please show that this calculation demonstrates the cutoff grade or tenor used to define your mineral resource has reasonable prospects for economic extraction. In establishing your cut-off grade, your disclosure must realistically reflect the location, deposit scale, continuity, assumed mining method, metallurgical processes, costs, and reasonable metal prices, i.e. based on a three-year historic average.

Property History, page 24

27. We note your use of sample ranges and terms such as the highest REE concentrations. When reporting the results of sampling and chemical analyses, please revise your disclosure to address each of the following regarding mineralization of existing or potential economic significance on your property:
- Disclose only weighed-average sample analyses associated with a measured length or a substantial volume.
 - Eliminate all analyses from “grab” or “dump” samples, unless the sample is of a substantial and disclosed weight.
 - Eliminate all disclosure of the highest or best values/grades of sample sets. Present a balanced disclosure of the drill and sampling results
 - Eliminate grades disclosed as “up to” or “as high as” or “ranging from.”
 - Eliminate statements containing grade and/or sample-width ranges.
 - Aggregated sample values from related locations should be aggregated based on a weighted average of lengths of the samples.
 - Generally, use tables to improve readability of sample and drilling data.
 - Soil samples may be disclosed as a weighted average value over an area.
 - Refrain from reporting single soil sample values.
 - Convert all ppb quantities to ppm quantities for disclosure.
 - Avoid optimistic descriptive adjectives such as high-grade or ore-grade.

Please revise your disclosures to comply with this guidance.

Closing Comments

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require for an informed decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Paul Monsour at (202) 551-3360, or Karl Hiller, Branch Chief, at (202) 551-3686 if you have questions regarding comments on the financial statements and related matters. You may contact Ken Schuler, Mining Engineer, at (202) 551-3718 regarding the engineering comments. Please contact Doug Brown at (202) 551-3265, or me at (202) 551-3745 with any other questions.

Sincerely,

H. Roger Schwall
Assistant Director