

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

**FORM 6-K**

REPORT OF FOREIGN ISSUER PURSUANT TO RULE 13a-16 AND 15d-16  
UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of: \_\_\_\_\_ September 2010

SEC File No. 000-53834

**RARE ELEMENT RESOURCES LTD.**

(Exact name of registrant as specified in its charter)

325 Howe St., #410, Vancouver, British Columbia, Canada V6C 1Z7

(Address of principal executive offices)

Exhibit 99.1 - Press Release, September 15, 2010

Exhibit 99.2 - Press Release, September 17, 2010

Indicate by check mark whether the Registrant files annual reports under cover of Form 20-F or Form 40-F

Form 20-F  Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Indicate by check mark whether the Registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under Securities Exchange Act of 1934.

Yes  No

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**SIGNATURE**

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this Form 6-K to be signed on its behalf by the undersigned, thereunto duly authorized.

Rare Element Resources Ltd. -- SEC File No. 000-53834  
(Registrant)

Date: September 20, 2010

/s/ Winnie Wong

Winnie Wong, Corporate Secretary



September 15, 2010  
 Ref: 20-2010

## Rare Element Reports Initial Drilling Results from 2010 Rare Earths Drilling on the Bull Hill SW Resource Area

<b>HIGHLIGHTS:</b>		
<b>Hole</b>	<b>FEET</b>	<b>Total Rare Earth Oxides</b>
RES 09-21	93	4.08%
	59	8.79%
	96	5.59%
RES 10-01	42.5	6.21%
RES 10-01A	97	6.57%
RES 10-02	38	6.88%
RES 10-03	42	12.02%
RES 10-04	162.7	4.64%
RES 10-06	15	11.96%
RES 10-07	25.7	9.86%
	97.5	8.43%
RES 10-12	58.5	5.54%
	13	9.34%

**Vancouver B.C. - Rare Element Resources Ltd. (TSX-V: RES and AMEX: REE)** is pleased to announce rare earth element (REE) assay results from thirteen drill holes completed during the ongoing 2010 core drilling program at the Company's 100% owned Bear Lodge property, located in northeastern Wyoming, USA (Figure 1). The results include a drill hole (RES 09-21) started during the 2009 drilling program, but completed during the 2010 program. All of the holes were drilled on the Bull Hill Southwest target, where an updated NI 43-101-compliant resource was estimated earlier this year. The objectives of the current drilling program are to expand the Bull Hill SW oxide resource and upgrade the resource category, and to explore for additional REE resources at the Bull Hill NW and Whitetail Ridge target areas.

Company Vice President Jim Clark states: "We are pleased with the initial results from our 2010 drilling program which include some of the highest grades drilled to date at Bear Lodge. The deposit remains open and with robust grades along strike to the southeast. We are anticipating the initial assay results from two holes at the Whitetail Ridge target, and from the initial 2010 drill holes at the Bull Hill NW target soon. These two areas are separate from the Bull Hill South West area."

### Drilling Results

The host for all rare earth mineralization in the Bear Lodge Mountains is a large alkaline igneous complex that forms the core of the mountain range. Rare earth mineralization intersected in the thirteen drill holes is primarily contained within the near-surface oxidized equivalents (FMR) of carbonatite dikes along the southwest flank of the Bull Hill diatreme in host rock that consists largely of heterolithic intrusive breccia. FMR refers to the major constituents of the highly oxidized, former carbonatite dikes that occur in the depth range from the surface to 300-500 beneath the surface— **F** (FeOx)-**M** (MnOx)-**R** (REE minerals).

REE assay values are reported by convention as the combined oxide equivalents (REO) of the fifteen elements in the lanthanide series + yttrium. The oxide equivalents are approximately 15.6% higher than the combined metal assay values. The Bear Lodge project contains predominantly the "light" REE (lanthanum, cerium,

praseodymium, and neodymium), and economically important quantities of several of the “heavy” REE (europium, dysprosium, and terbium).

Ten of the holes were drilled along a bearing of N45°E, while three of the holes were drilled on a bearing of S45°W from a series of sites on a resource evaluation grid established for the Bull Hill SW deposit in conjunction with Ore Reserves Engineering, the Company’s resource estimation consultant (Figure 1). The bearing, inclination, and assay intercepts from the REE-mineralized sections for each of the drill holes are summarized in Table 1 below.

**Table 1. Summary of REE-mineralized drill intercepts:**

**Drill hole RES09-21 (completed in 2010; N45E, -69°; total depth 1103 feet)**

Interval (feet)	Intercept (feet)	Est. true thickness	Mineralized lithology	TREO (%)
188-281'	93'	32'	FMR dikes	4.08% (includes 35'@5.43%)
291-321'	30'	20'	FMR dikes and stockwork	2.08%
339.5-398.5	59'	20'	FMR dikes and stockwork	8.79% (includes 32'@12.82%)
449-463.5	14.5'	8'	FMR dikes	6.48%
512-608'	96'	39'	Transitional carbonatite dikes	5.59%
800-810'	10'	10'	Carbonatite dikes and stockwork	2.10%
1060-1081'	21'	13'	Carbonatite dikes	1.83%

**Drill Hole RES10-01 (N45E, -45°; t.d. 530 feet)**

Interval	Intercept	Est. true thickness	Mineralized lithology	TREO (%)
88.5-131'	42.5'	22'	FMR dikes and stockwork	6.22%
231-237'	6'	4.5'	FMR dikes and stockwork	4.99%
363-368'	5'	3.5'	Transitional carbonatite stockwork	4.27%

**Drill Hole RES10-01a (N45E, -50°; t.d. 160 feet)**

Interval	Intercept	Est. true thickness	Mineralized lithology	TREO (%)
63-160'	97'	55'	FMR dike and stockwork	6.15% (includes 25.5'@15.00%)

**Drill Hole RES10-02 (N45E, -70°; t.d. 530 feet)**

Interval	Intercept	Est. true thickness	Mineralized lithology	TREO (%)
47-57'	10'	3.5'	Transitional carbonatite stockwork	2.56%
202-240'	38'	21'	Transitional carbonatite dike	6.88%
400-427'	27'	12.5'	FMR in fault gouge	1.99%

**Drill Hole RES10-03 (N45E, -45°; t.d. 498 feet)**

Interval	Intercept	Est. true thickness	Mineralized lithology	TREO (%)
103.5-145.5'	42'	36.5'	FMR dike and stockwork	12.02%
374-428'	54'	43'	FMR dikes and stockwork	2.61%

**Drill Hole RES10-04 (N45E, -70°; t.d. 498.5 feet)**

Interval	Intercept	Est. true thickness	Mineralized lithology	TREO (%)
261-423.7'	162.7'	53'	Transitional carbonatite dike and stockwork	4.64% (includes 53.5' @6.70%)
463.5-473.5'	10'	5.5'	Transitional carbonatite stockwork	2.78%

**Drill Hole RES10-05 (S45W, -45°; t.d. 400 feet)**

No significant results

**Drill Hole RES10-06 (N45E, -45°; t.d. 484 feet)**

Interval	Intercept	Est. true thickness	Mineralized lithology	TREO (%)
168-183'	15	10.5'	Transitional carbonatite dike	11.96%
197-202.5'	5.5'	4'	Transitional carbonatite dike	9.90%
399-419'	20'	13'	FMR stockwork	2.54%

**Drill Hole RES10-07 (N45E, -70°; t.d. 491 feet)**

Interval	Intercept	Est. true thickness	Mineralized lithology	TREO (%)
112-125.5'	13.5'	4.8'	FMR dikes	7.55%
213-238.7'	25.7'	15'	FMR dikes	9.86%
350-360'	10	4.2'	Transitional carbonatite dikes	4.10%
377-474.5'	97.5'	80'	Transitional carbonatite dike	8.43%; includes 63' @9.92%

**Drill Hole RES10-08 (N45E, -45°; t.d. 568.5 feet)**

Interval	Intercept	Est. true thickness	Mineralized lithology	TREO (%)
343-362'	19'	11.3'	FMR stockwork	3.19%
447-455'	8'	4'	FMR stockwork	2.40%

**Drill Hole RES10-09 (N45E, -70°; t.d. 767 feet)**

Interval	Intercept	Est. true thickness	Mineralized lithology	TREO (%)
466.5-497'	30.5'	24.3'	FMR dikes and stockwork	1.68%
517-547.5'	30.5'	15'	Transitional carbonatite stockwork	2.05%
567-577'	10'	2.5'	Carbonatite stockwork	1.98%
627-647'	20	7.5'	Carbonatite dikes	3.43%

**Drill Hole RES10-10 (S45W, -45°; t.d. 514.5 feet)**

Interval	Intercept	Est. true thickness	Mineralized lithology	TREO (%)
470-514.5'	44.5'	27.5'	Transitional carbonatite dike	2.98%

**Drill Hole RES10-12 (S45W, -85°; t.d. 593 feet)**

Interval	Intercept	Est. true thickness	Mineralized lithology	TREO (%)
121.5-180'	58.5'	10'	FMR dikes	5.54%; includes 12.5'@12.10% and 12'@10.47%
213-283'	70'	38'	FMR dikes (low recovery)	2.35%; includes 8'@10.89%
410-423'	13'	3'	FMR dike	9.34%
521-573'	52'	20'	Carbonatite dike and stockwork	3.30%

Drill holes RES10-1, 1a, 2, 3, 4, 5, 6, and 7 were drilled in the southeastern part of the Bull Hill SW deposit area, while drill holes RES10-8, 9, 10, and 12 tested the northwestern deposit area. The drilling results show that the target FMR and carbonatite bodies exhibit strong REE mineralization over a strike length of more than 1400 feet (426m). Detailed correlations of drill intercepts suggest a structural bias toward vertical or near vertical dips and a change in strike from northwesterly to almost due north in the northern third of the deposit.

The Company is in the process of preparing a **Preliminary Economic Assessment** on the Bear Lodge Project which will be announced shortly. The results from the 2010 REE drill program, including the results written above, will not be included in the Preliminary Economic Assessment.

**Assaying and Quality Control**

Assaying for the rare earth elements was conducted by ALS Chemex in their Vancouver, British Columbia assay facility. ALS Chemex Vancouver is accredited to ISO 9001 and operates according to ALS Group standards consistent with ISO 17025 methods at other laboratories. The samples were prepared and subjected to lithium metaborate fusion, followed by ICP analysis and a mass spectroscopy finish.

Analytical quality is monitored through the use of randomly inserted quality control samples, including standards, blanks, and duplicates, which are blinded to the analytical laboratory. Results of the analyses at ALS Chemex are evaluated continuously, and the results indicate acceptable accuracy and precision. Blank analyses also indicated no issues with carry-over contamination. The Company is also conducting a series of analytical "round-robin" test of four laboratories using samples with a known range of chemistry. The purpose of these tests is to evaluate the ongoing performance of the primary lab and to rank and rate the several labs that could be used as check labs or alternative options as a primary.

**Rare Element Resources Ltd (TSX-V: RES: AMEX: REE)** is a publicly traded mineral resource company focused on exploration and development of rare-earth elements and gold on the Bear Lodge property.

Rare-earth elements are key components of the green energy technologies and other high-technology applications. Some of the major applications include hybrid automobiles, plug-in electric automobiles, advanced wind turbines, computer hard drives, compact fluorescent light bulbs, metal alloys, additives in ceramics and glass, petroleum cracking catalysts, and a number of critical military applications. China currently produces more than 95% of the 130,000 metric tonnes of rare-earths consumed annually worldwide, and China has been reducing its exports of rare earths each year. The rare-earth market is growing rapidly, and is projected to accelerate if the green technologies are implemented on a broad scale.

**ON BEHALF OF THE BOARD**

*Donald E. Ranta, PhD, PGeo, President & CEO*

For information, refer to the Company's website at [www.rareelementresources.com](http://www.rareelementresources.com) or contact:

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Donald E. Ranta, PhD, PGeo, serves the Board of Directors of the Company as an internal, technically Qualified Person. Technical information in this news release has been reviewed by Dr. Ranta and has been prepared in accordance with Canadian regulatory requirements that are set out in National Instrument 43-101. This news release was prepared by Company management, who take full responsibility for content. Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

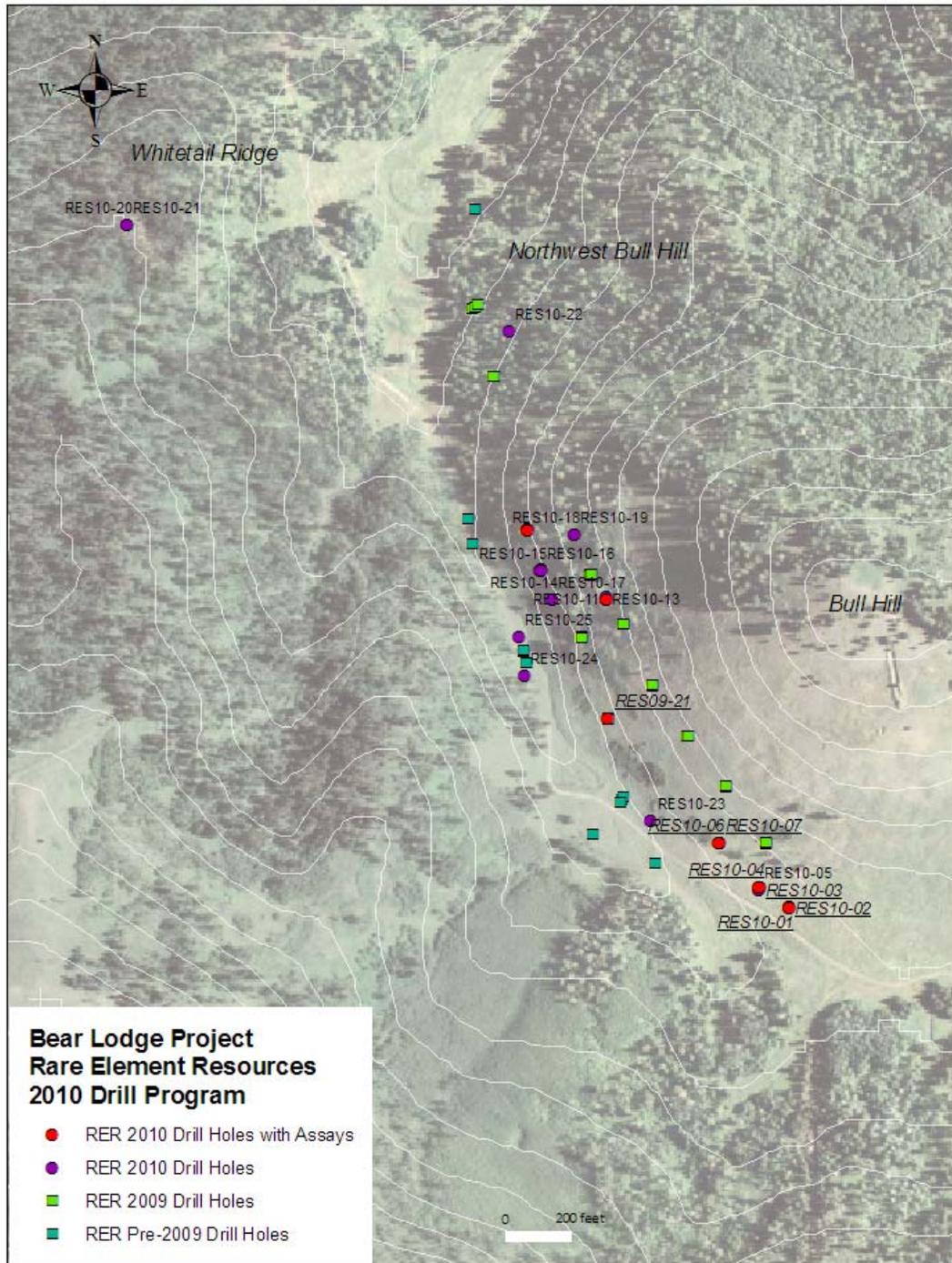


Figure 1. Bull Hill area targets and drill hole locations.



## **RARE ELEMENT EARLY ADOPTS INTERNATIONAL FINANCIAL REPORTING STANDARDS**

**VANCOUVER, BC – Rare Element Resources Ltd. (TSX-V: RES and AMEX: REE)** announces that its application to early adopt International Financial Reporting Standards (“IFRS”) under National Instrument 52-107 has been approved by the applicable Canadian Securities Administrators. The Company has chosen to early adopt IFRS and will commence reporting under these standards for the period beginning July 1, 2010, with a July 1, 2009 date of transition (the “Transition Date”). Comparative periods for fiscal 2010 will also be restated under IFRS.

As background, in February 2008, the Canadian Accounting Standards Board confirmed that IFRS will replace Canadian generally accepted accounting principles (“GAAP”) for all publicly accountable enterprises for financial periods beginning on and after January 1, 2011, with the option available for enterprises to early adopt upon receipt of approval from the Canadian Securities regulatory authorities. The United States Securities and Exchange Commission has also authorized foreign private issuers to file financial statements using IFRS without having to include a US GAAP reconciliation.

Adoption of IFRS will result in a single accounting standard whereas currently the Company reports under Canadian GAAP with a US GAAP reconciliation. The use of a single accounting standard will reduce costs and streamline financial reporting by developing common reporting systems and consistency across its subsidiaries.

The Company’s comprehensive IFRS conversion plan addresses changes in accounting policies, restatement of comparative periods, organization, internal controls and any required changes to business processes. The management of the Company has reviewed its accounting system, its internal controls and its disclosure control processes and believes they will not need significant modification as a result of the conversion to IFRS.

### **IFRS Conversion**

The Company’s comprehensive IFRS conversion plan addresses changes in accounting policies, restatement of comparative periods, organization, internal controls and any required changes to business processes. To facilitate this process and ensure the full impact of the conversion is understood and managed reasonably, the Company had external consultants, including the Company’s auditors DeVisser Gray, Chartered Accountants, assisting as needed. The accounting staff has also attended several training courses on the adoption and implementation of IFRS. Through in-depth training and the reconciliation of historical GAAP financial statements to IFRS, the Company believes that its accounting personnel have obtained a thorough understanding of IFRS.

The Company has reviewed its accounting system, its internal controls and its disclosure control processes and believes they do not need significant modification as a result of the conversion of IFRS.

### **Initial adoption of IFRS**

IFRS 1 “*First-time Adoption of International Financial Reporting Standards*” sets forth guidance for the initial adoption of IFRS. Under IFRS 1, the standards are applied retroactively at the Transition Date with all adjustments to assets and liabilities taken to retained earnings unless certain exemptions are applied. The Company will be applying the following exemptions to its opening balance sheet dated July 1, 2009:

(a) Business combinations

IFRS1 indicates that a first-time adopter may elect not to apply IFRS 3 *Business Combinations* retrospectively to business combinations that occurred before the date of transition to IFRS. The Company takes advantage of this election and applies IFRS 3 to business combinations that occurred on or after July 1, 2009. There is no adjustment required to the July 1, 2009's statement of financial position on the Transition Date.

(b) IFRS 2 – Share-based payment transactions

IFRS 2 *Share-based Payment* has not been applied to equity instruments that were granted on or before November 7, 2002, nor has it been applied to equity instruments granted after November 7, 2002 that vested before July 1, 2009.

(c) IAS 27 – Consolidated and Separate Financial Statements

In accordance with IFRS 1, if a company elects to apply IFRS 3 *Business Combinations* retrospectively, IAS 27 *Consolidated and Separate Financial Statements* must also be applied retrospectively. As the Company elected to apply IFRS 3 prospectively, the Company has also elected to apply IAS 27 prospectively.

(d) IAS 23 – Borrowing Costs

IAS 23 *Borrowing costs* has not been applied to borrowing costs relating to qualifying assets for which the commencement date for capitalization is on or after July 1, 2009.

(e) IAS 16 - Property, plant and equipment

IAS 16 *Property, plant and equipment* allows for property, plant and equipment to continue carried at cost less depreciation, same as under GAAP.

### **Impact of IFRS**

IFRS employs a conceptual framework that is similar to Canadian GAAP. The adoption of IFRS will not have any material impact on the financial information previously disclosed under Canadian GAAP. The Company identified the following adjustments as a result of the adoption of IFRS:

(a) “Contributed surplus” versus various reserves in equity

IFRS requires an entity to present for each component of equity, a reconciliation between the carrying amount at the beginning and end of the period, separately disclosing each change. The Company examined its “contributed surplus” account and concluded that as at the Transition Date, the entire amount of US\$876,046 relates to “Equity settled employee benefit reserve”. As a result, the Company believes that a reclassification would be necessary in the equity section between “Contributed surplus” and the “Equity settled employee benefit reserve” account.

For comparatives, as at September 30, 2009, the entire US\$871,524 “contributed surplus” account was reclassified into “Equity settled employee benefit reserve”. Furthermore, as at June 30, 2010, US\$1,477,734 “contributed surplus” account was broken down into US\$1,166,746 “Equity settled employee benefit reserve” and US\$310,988 “Reserves for agents’ options”.

(b) Share-based payment transactions

IFRS 2, similar to Under Canadian Generally Accepted Accounting Principles (“Canadian GAAP”), requires the Company to measure share-based compensation related to share purchase options granted to employees at the fair value of the options on the date of grant and to recognize such expense over the vesting period of the options. However, under IFRS 2, the recognition of such expense must be done with a “graded vesting” methodology as opposed to the straight-line vesting method allowed under Canadian GAAP. In addition, under IFRS, forfeitures estimates are recognized

in the period they are estimated, and are revised for actual forfeitures in subsequent periods; while under Canadian GAAP, forfeitures of awards are recognized as they occur.

Under IFRS graded vesting methodology, during the three months ended September 30, 2009, the Company would have recorded US\$123,218 as share-based payment versus US\$112,670 stock-based compensation under Canadian GAAP. As a result, US\$10,548 would be adjusted in the share-based payment expense in the statement of operations and the same amount would be adjusted in the equity settled employee benefit reserve in the statement of equity.

During the year ended June 30, 2010, the Company would have recorded US\$537,061 as share-based payment versus US\$524,497 stock-based compensation under Canadian GAAP. As a result, US\$12,564 would be adjusted in the share-based payment expense in the statement of operations and the same amount would be adjusted in the equity settled employee benefit reserve in the statement of equity.

(c) Cumulative Translation differences

IFRS requires that the functional currency of each entity of the Company be determined separately and record the foreign exchange resulting from the consolidation in equity rather than in the statement of operations. IFRS 1 provides an exemption and allows for such adjustments to be made as of the transition date, resulting in no change to the June 30, 2009 financial statements on the transition date.

For the three months ended September 30, 2009, the foreign exchange resulting from the consolidation amounted to a gain of US\$144,324, resulting in increasing the current period's loss in the statement of operations and recording an "Exchange reserve" in the Statement of Equity.

For the year ended June 30, 2010, the foreign exchange resulting from the consolidation amounted to a loss of US\$30,670, resulting in decreasing the current year's loss in the statement of operations and recording an "Exchange reserve" in the Statement of Equity.

In order to allow the users of the financial statements to better understand other changes between IFRS and GAAP that do not have any quantitative effect or adjustments to the Company's financial statements, the following qualitative explanation of the differences between GAAP and IFRS is provided:

(a) Income tax

Income tax expense is calculated in the same manner in accordance with GAAP and IFRS. Future income tax asset / liability is also calculated in the same manner in accordance with GAAP and IFRS.

(b) Property, plant and equipment

GAAP and IFRS allow the use of original cost less depreciation as the cost base. IFRS requires separate depreciation rate for components that depreciate differently.

(c) Exploration for and Evaluation of Mineral Resources

GAAP and IFRS allow the capitalization of costs associated with the exploration for and evaluation of mineral resources.

On Behalf of the Board of Directors

*"Mark T. Brown"*

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Mark T. Brown, CA  
CFO and Director  
Rare Element Resources Ltd.

This news release was prepared by Company management, which takes full responsibility for content. Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.