

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: February 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)

1. [Exhibit 99.1](#) - Press Release: February 23, 2010

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

Form 20-F xxx 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 xxx

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: March 1, 2010

/s/ Winnie Wong

Winnie Wong, Corporate Secretary

Definitive Eden Lake Rare-Earth Property Agreement Completed by Rare Element and Medallion

VANCOUVER, February 23, 2010 /CNW/ - Rare Element Resources Ltd ("Rare Element Resources" - TSX-V: RES) and Medallion Resources Ltd ("Medallion" - TSX-V: MDL) announce that they have completed and executed a definitive option agreement whereby Rare Element grants to Medallion an option ("Option") to acquire a 65% interest in a joint venture to explore the Eden Lake rare-earth-element (REE) property, located in western Manitoba, Canada ("Property"). Medallion has filed the definitive option agreement, along with an NI 43-101-compliant Technical Report on the Eden Lake property, with the TSX Venture Exchange for final approval. Option terms are presented below.

"We are pleased to confirm our working relationship with Rare Element, President Don Ranta and his team," said Bill Bird, president of Medallion. "As we evaluate available data and plan our upcoming 2010 program, it's clear to me that we have one of the best REE projects in North America. The Eden Lake REE geology is a unique combination of an alkalic intrusive complex with essential carbonatite, a large area of multiple styles of REE mineralization and a potential for elevated heavy REE's. Eden Lake also is one of the very few significant REE properties in Canada within practical range of roads, power and mining-friendly communities. Our team of recognized REE veterans is ready to go to work".

Dr Ranta adds, "The execution of Rare Element's agreement with Medallion sets the stage for significant achievement at the Eden Lake REE property. The collation and re-evaluation of data and the completion of the airborne geophysical survey announced earlier this month is a solid beginning. We are excited by Medallion's rapid progress and Dr Bird's enthusiasm, which are justified by the quality of the Eden Lake property."

Option Terms

For Medallion to maintain its Option to acquire a 65% joint-venture interest in the Property, Medallion must complete, over a five-year period, the following cash and share payments to Rare Element and complete the following Property-exploration expenditures:

Five-Year Option to earn 65% interest in joint venture to explore Eden Lake property	Cash payment	Medallion common shares	Property Work commitment
Initial payment	\$25,000		
At the signing of the definitive agreement	\$25,000		
Upon TSX Venture Exchange approval	\$50,000	200,000	
End of first year	\$50,000	200,000	\$250,000
End of second year	\$100,000	200,000	\$500,000
End of third year	\$200,000	200,000	\$500,000
End of fourth year	\$500,000	500,000	\$500,000
End of fifth year	\$500,000	500,000	\$500,000
TOTAL	\$1,450,000	1,800,000	\$2,250,000

Production from the Property will be subject to an underlying 3% Net Smelter Return royalty ("NSR") in favour of the prospector that originally staked the property. Half of this NSR may be purchased for \$1.5 million.

Upon completion of the cash and share payments and work commitments, Medallion may exercise its Option to acquire a 65% interest in a joint venture with Rare Element that will be created to further explore and develop the Property (Medallion will hold 65% and Rare Element will hold 35%).

Medallion will be the operator of the exploration program during the Option period and, as the majority interest holder, Medallion would be the operator of the joint venture, as well.

The Eden Lake REE property is a recent discovery and one of the ten-most-promising North American REE prospects. A very large mineralized area, high-grade assays and multiple-mineralization styles support a number of targets for REE mineralization over a large surface area. Elevated yttrium and heavy-REE geochemical-sample values indicate a potential for concentrations of the more valuable heavy REE's. The property is located 20 kilometres northwest of the town of Leaf Rapids in western Manitoba, which offers supportive regional infrastructure & logistics. According to the Fraser Institute, mining-friendly Manitoba is considered the second-best jurisdiction in the world for exploration and mining. The property is expected to present few permitting, environmental or social concerns.

Rare Element Resources Ltd (TSX-V: RES - News) is a publicly traded mineral-resource company focused on rare-earth elements and gold. Rare Element has a 100% interest in the Bear Lodge property, Wyoming, which has a central core area of rare-earth mineralization and a surrounding cluster of gold occurrences. Rare Element is expanding and evaluating the rare-earth deposit, which has a NI 43-101-compliant resource, and is exploring other REE targets. In addition to the REE exploration and evaluation efforts, Rare Element and Newmont participate in the Sundance gold exploration venture on Bear Lodge property.

Medallion Resources Ltd (TSX-V: MDL - News) explores for rare-earth elements, which are required by many new energy-saving technologies. Increasing interest in energy conservation and environmental protection are fuelling intense interest in, and public awareness of these critical commodities. As understanding and demand increase, Medallion is well positioned to take part in potential breakthroughs in the exploration for these rare metals.

ON BEHALF OF THE RARE ELEMENT
RESOURCES BOARD OF DIRECTORS

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

ON BEHALF OF THE MEDALLION
RESOURCES BOARD OF DIRECTORS

"William H Bird", PhD, PGeo,
President & CEO

Donald E Ranta, PhD, PGeo, serves the Rare Element Board of Directors 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 Rare Element 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.

Medallion management, who takes full responsibility for content, prepared this news release. William H Bird, PhD, PGeo, who serves the Board of Directors of Medallion Resources as an internal, technically Qualified Person, has reviewed this release. The TSX Venture Exchange has not reviewed and does not accept responsibility for the adequacy or accuracy of this release. Some of the statements contained in this release are forward-looking statements, such as estimates and statements that describe the Medallion's future acquisition and exploration plans, objectives or goals, including words to the effect that Medallion or its management expects a stated condition or result to occur. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results in each case could differ materially from those currently anticipated in these statements. Such risks include expectations that may be raised by discussing potential acquisitions. Also, in order to proceed with Medallion's exploration plans, additional funding is necessary and, depending on market conditions, this funding may not be forthcoming on a schedule or on terms that facilitate Medallion's plans.

For further information

refer to Rare Element's web site www.rareelementresources.com or contact:
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Donald E Ranta, (604) 687-3520, don@rareelementresources.com

refer to Medallion's web site www.medallionresources.com or contact:
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