

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: _____ March 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 - March 9, 2010 Press Release

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 10, 2010

/s/ Winnie Wong

Winnie Wong, Corporate Secretary



Rare Element Reports 2009 Rare Earth Drilling Results from the Bull Hill Northwest Target Area

Hole RES09-8 containing an estimated aggregate true thickness of 213.4 feet at an average assay grade of 5.54% REO

Rare Element Resources Ltd. ("the Company") (TSXV:"RES") is pleased to announce 2009 REE assay results from five drill holes that explored the Bull Hill Northwest target area (Figure 1). The Bull Hill NW target was identified on the basis of Hecla Mining Company's drill Hole WP-2, drilled in 1987. Historic drill hole WP-2 intersected 186 feet assaying 9.56% rare earth oxides (REO) from the depth interval 23 – 209 feet (estimated true thickness = 40.5') and 80 feet assaying 5.65% REO in the depth interval 1170 – 1250 feet (estimated true thickness = 45.9'). During the 2009 program the Company drilled five holes aggregating 5,141 feet in the area of the target. The objectives of the exploration drilling were:

- Offset the high-grade mineralized bodies intersected in historic drill hole WP-2.
- Determine whether the WP-2 dikes are part of the NW-trending Bull Hill SW resource area dike sets, or if they are representative of a new REE-mineralized system.
- Determine the definitive structural orientation and mineralization controls of REE mineralization in the Bull Hill NW target area.

Table 1. Significant assay results from the five drill holes

Drill Hole #	Orientation, Total Depth	Intercept	Estimated True Thickness	Mineralization Type
RES09-4	N45°E, -45°; 1003'	95 - 111' 16' @ 2.89% REO	16'	FMR stockwork *
		530.5 - 533' 7.5' @ 2.84% REO	5.8'	FMR veins
		598 - 606' 8' @ 5.01% REO	5.7'	FMR veins
		711 - 717' 6' @ 6.36% REO	4.9'	Carbonatite dike
RES09-5	N45°E, -70°; 1014'	320-330' 10' @ 2.08% REO	5.7'	FMR veins
		380 - 400' 20' @ 3.45% REO	16'	FMR dikes, veins
		530 - 560' 30' @ 2.16% REO	28.2	FMR dikes, veins
		660 - 674' 14' @ 5.84%	8'	Carbonatite dike
RES09-7	N45°E, -70°; 1054'	70 - 80' 10' @ 2.19% REO	10'	FMR stockwork
		670 - 680' 10' @ 3.09% REO	8'	Trans carbonatite
RES09-8	N00°E, -45°; 1071'	130 - 150' 10' @ 4.25% REO	10'	FMR dikes, veins
		170 - 210' 40' @ 3.21% REO	40'	FMR stockwork
		240 - 279' 39' @ 4.68% REO	36.6'	FMR dikes
		279 - 290' 11' @ **(Second split currently being re-assayed)		FMR dike
		290 - 324' 34' @ 6.25% REO	26'	FMR dikes
		340 - 427' 87' @ 3.31% REO	43.5'	FMR dikes
		450 - 511' 61' @ 6.11% REO	35'	FMR dikes, veins
		548 - 558' 10' @ 9.12% REO	9.4'	FMR dike, stkww
		910 - 930' 20' @ 2.39% REO	12.9'	Carbonatite
RES09-11	N45°W, -45°; 999'	80 - 90' 10' @ 2.11% REO	8.9'	FMR veins

*FMR is defined as oxide material having FeOx + MnOx + REE as the principal components. FMR is the near-surface oxidized equivalent of carbonatite dikes that occur at depth in the unoxidized zone.

The 2009 drilling data from the Bull Hill NW target area indicate that the REE-mineralized bodies do not represent the extension of the Bull Hill SW resource area carbonatite/FMR dike sets. Rather, they appear to represent a discrete set of carbonatite/FMR veins and dikes whose emplacement may be controlled by a NE-trending fault zone along the Whitetail Creek drainage or which may represent a separate new REE system within and north of the fault.

Dr. James Clark, Rare Element Resources' VP Exploration states, "We are excited about the results from drill hole RES09-8, because it complements drill results from the historic Hecla WP-2 drill hole and indicates that the Bull Hill NW target area may harbor a significant new REE resource, open to the north and with excellent possibilities for higher-grade material. An important part of the 2009 exploration drilling program will focus on understanding the controls, orientation, and extent of the mineralization, and delineation of a potential associated REE resource."

Activation Laboratories (ActLabs) conducted the rare earth assays in their Ancaster, Ontario assay facility. The samples were prepared and subjected to lithium metaborate fusion, followed by ICP analysis and a mass spectroscopy finish. ActLabs is an internationally respected analytical laboratory with extensive experience in rare earth element analysis.

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, neodymium, and samarium), but also small quantities of the "heavy" REE, including europium, gadolinium, terbium, dysprosium, and yttrium, as shown in Table 2.

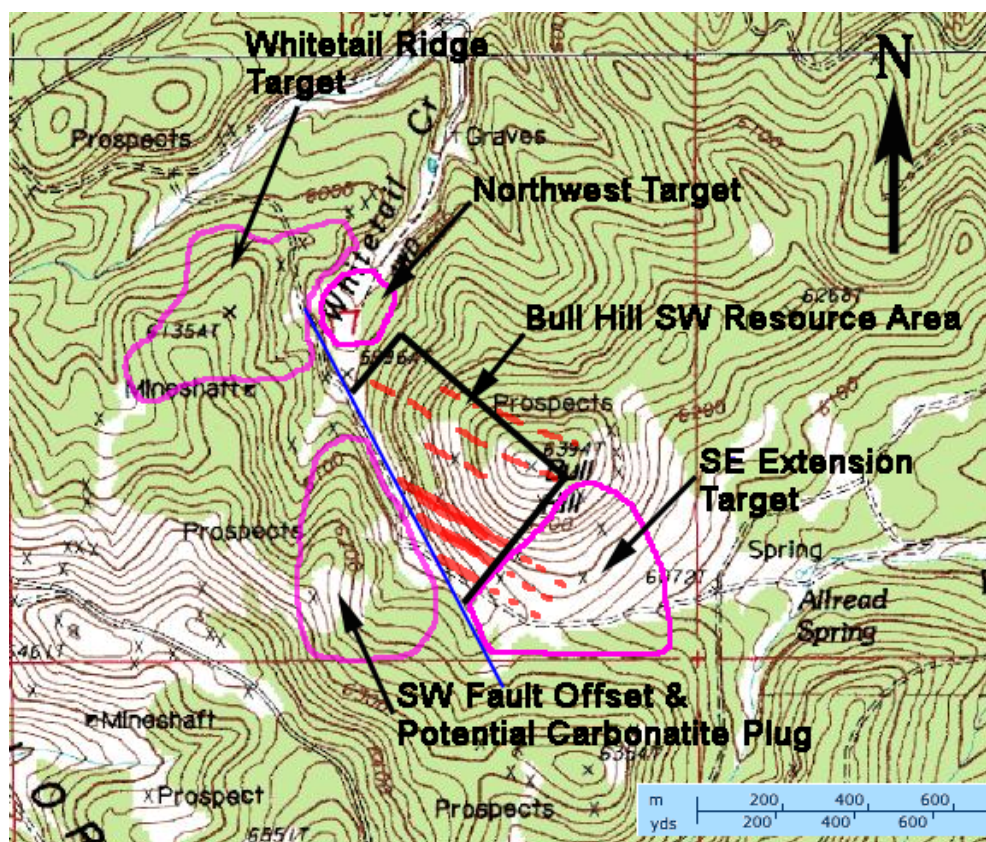


Figure 1. Bull Hill area exploration targets. "Northwest target" also known as Bull Hill Northwest target.

Table 2. Typical REE Distribution in the Bear Lodge Deposit

Rare-Earth Element	Oxide Sample *	Unoxidized Sample *
Lanthanum	29.3%	32.5%
Cerium	45.0%	46.4%
Praseodymium	4.8%	4.3%
Neodymium	16.8%	13.7%
Samarium	2.0%	1.4%
Europium	0.4%	0.3%
Gadolinium	0.8%	0.6%
Terbium	0.1%	0.0%
Dysprosium	0.2%	0.2%
Yttrium	0.5%	0.5%
Total	99.9%	99.9%

Rare Element Resources Ltd (TSX-V:RES) is a publicly traded mineral resource company focused on exploration and development of rare-earth elements and gold on the Bear Lodge property. Gold exploration in the Bear Lodge Mountains has been conducted for several decades with several companies significantly contributing to the database and understanding. Newmont's recent exploration efforts are the most comprehensive and extensive of these programs. Newmont has the right to earn a 65% working interest in Rare Element Resources' property, excluding any rights to the rare-earth elements but including rights to gold and other metals, by performing US\$5 million in property work expenditures over a five-year period. Newmont also has the right to earn an additional 15% working interest by completing a positive project feasibility study.

On behalf of the Board,
Donald E Ranta, PhD, PGeo,
President & CEO

For information, refer to the Company's website at www.rareelementresources.com or contact:

Donald E Ranta, President & CEO, (604) 687-3520 don@rareelementresources.com
Mark T. Brown, CFO, (604) 687-3520 ext 242 mtbrown@pacificopportunity.com.

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, 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.