

[Rare Element Resources Ltd.](#) (the "Company" (NYSE MKT: REE and TSX: RES), a strategic materials company focused on delivering rare earth products to technology industries by advancing the Bear Lodge Critical Rare Earth Project, announced today successful completion of bench-scale testing of its proprietary rare earth separation technology with the following highlights:

- Streamlined process with significantly fewer mixer/settlers and an innovative technique for quickly stripping loaded organic solvents outside of solvent extraction (SX) without the use of strong acids. These factors should result in a significantly smaller footprint than conventional SX processes;
- Initial removal of 100% of the thorium using commercially available organic extractants in a single-contact SX step;
- Early removal of cerium, the lowest valued rare earth, to allow for significantly reduced downstream SX requirements along with lower reagent and energy consumption;
- Fewer steps, smaller footprint and lower acid and energy requirements are all expected to result in lower operational and capital costs;
- Closed circuit recovery process is highly efficient, with no waste discharge or need for precipitation units or electrolytic plants, making it environmentally sound and consistent with the Company's zero waste effluent strategy; and
- High-purity end products, individual or combined, should mean higher realized value for the Company.

The technology enhances traditional SX methods and generates multiple, high-purity separated products using as feedstock the 98% pure, total rare earth oxide (TREO) concentrate produced from Bear Lodge mineralized material. After removing all of the thorium, the technology successfully extracted approximately 92% of the cerium, the largest element by mass in the mineralized material, in a single-stage mixer/settler. This would make it possible to greatly reduce the SX plant capacity for downstream separation of the more valuable REE in the advanced separation process. Lanthanum and three mixed rare earth products were produced consisting of didymium (neodymium and praseodymium, or NdPr); SEG (samarium, europium and gadolinium); and the remaining heavy rare earth elements (terbium thru lutetium and yttrium (Tb-Lu + Y) or HREE)).

The Company's innovative process modifies traditional SX to eliminate the need to chemically strip loaded organic solvents with strong acids. The rare earth elements (REE) are instead recovered directly from the loaded organics almost instantaneously without the use of mixer/settlers and in a process that prevents the generation of waste effluents. Consequently, these advancements allow for the design of a streamlined REE separation process that is expected to require significantly less SX capacity, result in higher extraction efficiencies, deliver high-purity end-products, generate zero waste effluents and reduce both operating and capital costs. The Company filed a provisional patent application on its enhanced REE and thorium separation technology on May 21, 2015.

Over the last several months, we have expanded our patent-pending technology by identifying a process flow sheet that delivers multiple saleable products, both efficiently and in what we believe will be a very cost-effective manner," said Jaye T. Pickarts, Chief Operating Officer. "By improving upon conventional SX technology and introducing this innovative method for stripping organic liquor outside the SX process, we expect to be able to meaningfully reduce the required SX capacity and significantly cut down on reagent and energy consumption. During bench-scale testing, we were able to accomplish high-extraction efficiencies and deliver multiple end-products that were greater than 99% pure. These significant achievements represent real value to our project and for our future customers."

Under the direction of Dr. Henry Kasaini, Rare Element Resources' Director of Science & Technology, SX and stripping tests were performed by SGS-Lakefield, Canada, and Hazen Research Laboratory, Colorado. The bench-scale SX tests were conducted by using as feedstock the Bear Lodge 98% pure, TREO concentrate generated from the Company's 2013 pilot plant tests of its proprietary hydrometallurgical (Hydromet) recovery technology. The remaining impurities in the feedstock prior to separation are thorium and minor traces of base metals.

Innovation Improves the Conventional Process

In most traditional SX processes, commercial organic extractants are designed to bind with specific REE in solution by forming strong electrovalent bonds, which can only be broken by using strong acids in mixer/settlers. The Company's innovative stripping technology makes it possible to crystallize and recover the separated elements from the loaded organics almost instantaneously as pure REE solids without the use of strip mixer/settlers. This stripping technology reduces the need for a large number of mixer/settlers and significantly lowers the use of strong acids. The separated products (cerium, lanthanum, NdPr, SEG and HREE) were all over 99% pure in testing, making them attractive, marketable products.

In the rare earth recovery industry, traditional SX is often operated in a closed circuit with either electrolytic or precipitation plants for the sole purpose of treating SX process effluents to prevent the discharge of any deleterious waste materials. Because the Company's process immediately strips organic solvents loaded with rare earths outside SX without the use of strong acids and occurs in a closed-circuit, it does not generate any waste effluents to be reprocessed and therefore does not need expensive electrolytic or precipitation plants. This is mainly due to the processing of a nearly pure feedstock (>98% TREO) and the ability to recycle both the stripped organics and the crystallizing media in the circuit. The multiple advantages this process represents are expected to result in lower capital and operating costs than traditional SX. All these factors result in increased efficiency, significantly reduced acid and energy use and zero waste effluents.

The Company intends to run a pilot plant on the separation flow sheet (up to 9 kg per day using 98% TREO concentrate

feedstock) to reconfirm the high extraction efficiencies and new stripping technology on a continuous basis. These tests will also confirm separated product purity and the ability to tailor REE products for potential customers.

Staged Separation Delivers a Number of Pure, Saleable Products

The first step in the innovative separation process is a single SX step that removes 100% of the remaining thorium in the > 98% pure feed stream generated from the Hydromet testing. The thorium occurs naturally and at low levels in the Bear Lodge bastnasite deposits and is concentrated as a result of the recovery process. Its early removal from the bulk REE feed eliminates possible contamination of downstream separated products. The Company currently plans to send the thorium to a licensed disposal facility.

Essentially all of the cerium, the lowest valued and highest volume of the REE in the Bear Lodge mineralized material, is then removed in a two-contact process with the first contact removing approximately 92% of the cerium. This produces a cerium oxide product that is more than 99% pure. Early removal of the cerium reduces the volume of material moving to advanced separation by almost one-half, and is expected to cut down the size of the required downstream SX capacity, as well as significantly reduce reagent and energy requirements.

The next step uses the patent-pending, advanced purification process, announced by the Company in November 2014, to remove small traces of impurities, including any remaining cerium and base metals. This produces a bulk REE material that is thorium/cerium-free and 99.999% pure REE.

This 99.999% pure, REE material, which has been reduced in mass by 50%, becomes the feedstock for the Company's advanced separation process. In a limited number of subsequent SX steps, the Company has successfully produced the light rare earth products of high-purity lanthanum, which is used primarily in optical fibers and glass and in nickel-metal hydride rechargeable batteries for hybrid cars, and NdPr, which is a valuable material used to make high-demand permanent magnet alloys. It has also produced SEG and HREE mixed products. Each of these can be sold as a mixed product or processed further, with only a few additional SX steps, to separate them into individual elements.

The Company is continuing its dialogue with a number of end-users to determine the product mix that is readily marketable, most cost-effective and that will obtain the highest return for the Company.

[Rare Element Resources Ltd.](#) is a publicly traded, strategic materials company focused on delivering rare earth products to technology industries by advancing the Bear Lodge Critical Rare Earth Project in northeast Wyoming. Bear Lodge is a significant mineralized district containing many of the less common, more valuable critical rare earths that are essential for electronics, fiber optics, laser systems for health and defense, as well as many evolving green technologies, like hybrid cars, solar panels and wind turbines. Permitting and feasibility work on the Project continue to advance. The Company is an affiliate member of the U.S. Department of Energy's Critical Materials Institute, a combined government and private sector organization committed to eliminating supply chain issues for rare earths and other critical elements.

For additional information, please visit the Company's website at www.rareelementresources.com or contact Robbin Lee at 720-278-2462 or ree@rareelementresources.com.

Forward Looking Statements

This news release contains forward-looking statements and forward-looking information within the respective meanings of securities legislation in the United States and Canada. Except for statements of historical fact, certain information contained herein constitutes forward-looking statements. Forward-looking statements are usually identified by our use of certain terminology, including "will", "believes", "may", "expects", "should", "seeks", "anticipates", "plans", "has potential to", or "intends" (including negative or grammatical variations thereof) or by discussions of strategy or intentions. Such forward-looking statements include statements regarding the potential value of high-extraction efficiencies to the Bear Lodge Project and future customers, plans to run a pilot plant, the advantages of the Company's improved separation technology, including lower SX capacity requirements, lower acid and energy requirements, reduced effluents and lower operational and capital costs, plans for disposing of removed thorium and advancement of permitting and feasibility work.

Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results or achievements to be materially different from any future results or achievements expressed or implied by such forward-looking statements.

Factors that could cause actual results to differ materially include, but are not limited to, the progression plans for the Bear Lodge Project, the progress and results of the feasibility study, fluctuations in demand for, and price of, rare earth products; success of process technology under testing or development and timing; results from geological evaluations and programs; timing of and unexpected events at the Bear Lodge property and in connection with construction of the pilot plant; delay or failure to receive government approvals and permits; changes in U.S. and Canadian securities markets; and our ability to raise additional financing necessary to construct the pilot plant and conduct our business. There can be no assurance that future

developments affecting the Company will be those anticipated by management. Please refer to the discussion of these and other factors set out in our filings made from time-to-time with the United States Securities and Exchange Commission, and the Canadian securities regulators, including without limitation, the Company's most recent reports on Form 10-K and Form 10-Q. We do not undertake to update any statements or estimate at any particular time or in response to any particular event. Investors and others should not assume that any forecasts in this news release represent management's estimate as of any date other than the date of this news release.

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Contact

Rare Element Resources Ltd.
Robbin Lee, 720-278-2462
rlee@rareelementresources.com.