



**INITIATING COVERAGE**

**Metals & Mining: Minor Metals**

May 2, 2011

Anthony Young, Director  
[ayoung@dahlmanrose.com](mailto:ayoung@dahlmanrose.com) 212.702.4501

Anthony B. Rizzuto, Jr., Managing Director  
[arizzuto@dahlmanrose.com](mailto:arizzuto@dahlmanrose.com) 212.702.4500

**RARE ELEMENT RESOURCES LTD.**

(NYSE:REE)

**Initiation: A "Light" Weight Entrant, with a Golden Option**

We believe the company's location, accessibility to infrastructure and straightforward metallurgy make an investment in the shares attractive. While capital costs may trend higher, we continue to see value and rate the shares a Buy with a \$21 price target.

**We are initiating coverage of Rare Element Resources with a Buy rating and a \$21 price target**

We like the relatively long-life, low operating cost structure that management has outlined in its preliminary economic assessment. Further, we believe the deposit's proximity to existing infrastructure gives the company a strategic advantage in terms of the capital needed to develop the project relative to its competitors. The simple metallurgy at the site should facilitate the straightforward construction of a processing facility. We value the shares using a NAV analysis that discounts free cash flows from rare earth mining operations.

**Management pursuing a flexible plan, which may lead to the monetization of gold ore body or sale of the entire company**

The company has a gold ore body located on the Bear Lodge deposit, which we believe the company may look to monetize in order to fund construction of the rare earth ore body. Further, the company's decision to produce concentrate first rather than rare earth oxides could make it an acquisition target for a company that has excess rare earth concentrate processing capability. In our base case valuation analysis, we anticipate that the company will build a processing facility in Year Five.

**Location and simple metallurgy make the equity compelling**

With the Bear Lodge ore body located in Wyoming, a jurisdiction which is extremely friendly toward mining, we do not believe that the company should have any trouble obtaining the necessary permits in a timely fashion. Therefore, we believe the timeline that management has laid out should be achievable. A relatively straightforward plan, combined with simple metallurgy and leverage to rare earth prices, make REE shares compelling, in our opinion.

Please read Required Disclosures & Analyst Certification on the last pages of this report.

**Recommendation**

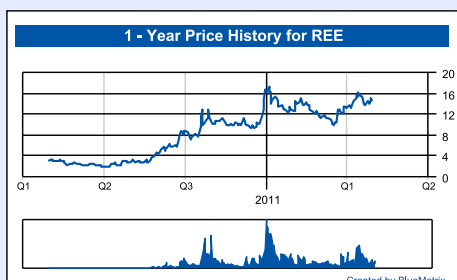
Rating:	Buy
Price Target:	\$21.00
Expected Return:	45.3%
Enterprise Value (MM):	\$606.4

**Earnings Per Share**

	2010A	2011E	2012E
FY	\$(0.06)	\$(0.08)	\$(0.10)

**Stock Statistics as of 04/29/2011**

Price:	\$14.45
52W Range:	\$18-\$1
Shares Out (MM):	46.6
Market Cap (MM):	\$673.4
Net Debt:	\$(67.0)





## Executive Summary

Rare Earth Resources is an exploratory stage rare earth company with production expected to commence in 2015. We believe that the company's assets are strategically located to take advantage of existing infrastructure, which should generate significant capex savings. In addition to positioning itself to profit from rising REO prices, the company's assets also have exposure to gold. An inferred resource estimate was recently completed and resulted in an inferred gold resource of 947,000 ounces at a 0.42 g Au/mt ore grade. We do not include any value from this gold resource in our price target, as further testing is needed to establish economic feasibility, but we believe it is possible the company may look to monetize this asset in order to fund construction of its rare earth project.

The company's flagship Bear Lodge asset is located in northeastern Wyoming and has a current inferred resource estimate of approximately 539,000 mt REO at a 3.46% ore grade and 1.5% cutoff. The company has completed a Preliminary Economic Assessment (PEA) which resulted in a 15-year mining plan with annual capacity of 10,400 mt of rare earth concentrate. Additional testing is ongoing to further define the resource base, improve the initial mining plan, and investigate the possibility of adding a separation facility to the site to produce finished rare earth oxides, which have significantly higher resale value than rare earth concentrate. Our valuation is based on the company adding the separation facility in year five and marketing rare earth oxides from that point forward.

With an asset in the United States, access to infrastructure and an advanced stage development project, we believe that the company may be a potential takeover target. The ore body at Bear Lodge is carbonatite, which can easily be processed by existing facilities. While we believe the shares represent a compelling value on their own merits, the possibility of a takeover should provide support to the shares.

We derive our \$21 price target using a NAV analysis, which utilizes discounted free cash flows generated from the company's rare earth mining operations. Although the recently completed PEA calls for an initial 15-year mine life, we believe that this will ultimately be extended based on the size of the deposit once additional testing is concluded. As such, we are estimating a 25-year mine life in our NAV. We see significant upside in the shares despite using REO price estimates that may prove to be conservative.

## Valuation

Our \$21 price target is derived through a NAV analysis, which discounts free cash flows generated by rare earth mining operations. We utilize a 15% discount rate to reflect the risk associated with production estimates and potential startup delays. As production becomes more imminent and additional testing is completed to further define the asset base and refine the metallurgical plan, a lower discount rate may be employed. Additionally, when economic feasibility is determined for the company's gold resource, associated cash flows will be incorporated into our analysis.



## Exhibit 1: Estimate Summary

## Rare Element Resources Ltd

<b>Price Target</b>	\$ 21.00 USD
<b>Annual Production at Capacity (mt REO)</b>	10,400
<b>Estimated Mine Life</b>	25 years
<b>Discount Rate</b>	15%
<b>Inferred Resource Ore Grade</b>	3.46%
<b>Estimated Capital Expenditure (in millions)</b>	\$ 415 USD

**NOTE:** We assume the sale of rare earth oxides will begin in the 5th year of operation and that the company will sell rare earth concentrate (estimated 30% discount to REO price) during years 1-4. Stated capex reflects construction of a separation facility.

Source: Dahlman Rose & Co. estimates

## Sensitivity

The ore body at the Bear Lodge site consists primarily of light rare earths (97%), and as a result, revenue will be most sensitive to price movement in those elements. The deposit has a high concentration of lanthanum (31%), which is used in hybrid electric car batteries, a primary end market going forward. Our long-term price forecasts take into account the additional supply coming on line over the next decade, and are on average approximately 50% lower than current spot prices. Our estimate for cerium, which is expected to be the first element with a supply surplus, is roughly 25% of the current spot price.

Our price target is sensitive to both rare earth pricing and the time until the commencement of production. We anticipate the sale of rare earth concentrate in 2015 and the sale of REO in 2019. Delays in production will have a significant impact on our NAV analysis. The effects of both pricing and startup delays, as well as a breakdown of the composition of the ore body, are shown in Exhibits 2 and 3.



## Exhibit 2: Price Target Sensitivity to REO Price and Production Startup

		Average REO price			
		3 Year Average	China Domestic	DRCO Estimate	China FOB
Production Start	Baseline	6.55	14.50	21.00	67.75
	1 Year Delay	5.60	12.55	18.30	58.85
	2 Year Delay	4.80	10.85	15.85	51.10

Current Price Target

Source: Dahlman Rose & Co. estimates

## Exhibit 3: Composition of Ore Deposit

Element	Symbol	Hudson	Lynas	Molycorp	REE	Avalon	Quest
<b>Light Rare Earths</b>							
Cerium	Ce	39%	45%	49%	47%	36%	27%
Lanthanum	La	12%	25%	34%	31%	16%	13%
Neodymium	Nd	33%	17%	12%	12%	18%	11%
Praseodymium	Pr	7%	5%	4%	4%	5%	3%
Samarium	Sm	5%	2%	1%	2%	4%	3%
<b>Heavy Rare Earths</b>							
Dysprosium	Dy	0%	1%	0%	0%	3%	4%
Erbium	Er	0%	0%	0%	0%	1%	3%
Europium	Eu	1%	1%	0%	1%	1%	0%
Gadolinium	Gd	2%	2%	0%	1%	4%	3%
Holmium	Ho	0%	0%	0%	0%	1%	1%
Lutetium	Lu	0%	0%	0%	0%	0%	0%
Terbium	Tb	0%	0%	0%	0%	1%	1%
Thulium	Tm	0%	0%	0%	0%	0%	1%
Ytterbium	Yb	0%	0%	0%	0%	1%	3%
Yttrium	Y	0%	2%	0%	1%	12%	28%

Source: Company Reports, Dahlman Rose & Co. estimates



## Risks to Price Target

**Change in REE Market** – Although pricing for REEs has increased over the past few years, this pattern is not guaranteed to continue. The supply picture is expected to change over the next decade and should directly affect market prices. It is possible that by the time the company is ready to begin production, market prices may make the operation unprofitable.

**Development Delays** – Although feasibility analysis is still ongoing, production is not expected to commence until 2015. Any construction or development related delays that push back initial production beyond this date will affect NAV derived price targets.

**Exploration Stage Company** – Since the company is still in the exploratory stage, there is no guarantee that an economically viable business model can be developed. Substantial funds will be spent during exploration and testing and may not ultimately result in the company being able to secure a reserve that can be effectively brought to market.

**Lack of Profitability and Need of Financing**– As an exploration stage company currently without production, the company has not yet achieved profitability. The company will need to secure financing to build production facilities if and when viable reserves are identified, and this may lead to the dilution of current shareholders.

**Currency Fluctuations** – The company's main assets are located in the United States and its financial statements are presented in US dollars. Since the company has its accounts in Canadian dollars, a US dollar appreciation will increase the effective cost of doing business in the United States. The company currently does not hedge for currency risk.

**Environmental Regulation Risks** – The company has assets in the United States and Canada, and any change in environmental policy can potentially be detrimental to the company's operations. Since mining operations typically have a significant carbon footprint, it is possible that future regulations will seek to lower emissions.

## Company History

Rare Element Resources was founded in June 1999 in British Columbia. In 2003, it acquired Paso Rico Resources Ltd., and with it, the Bear Lodge Property in Wyoming. This deposit is currently under exploration for both gold and rare earths.

### Properties

#### Bear Lodge REE Project

The Bear Lodge REE property is a carbonatite deposit located on a 16 square mile site located in Crook County, northeastern Wyoming and contains an inferred resource base of 550,000 mt REO at a 3.46% ore grade and 1.5% cutoff. The resource base was estimated via the NI 43-101 compliant Technical Report dated April 14, 2009 and a subsequent update in May 2010. The property contains both light and heavy REEs, though light rare earths contribute toward the vast majority of the project's profitability.



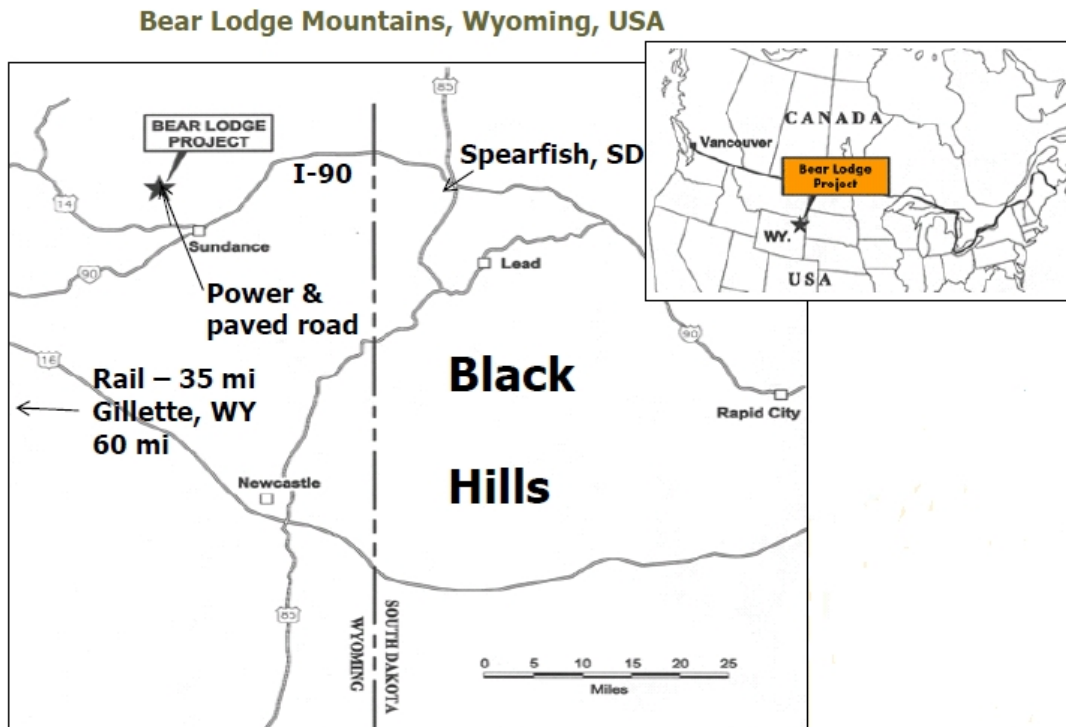
Testing to determine the economic viability of the entire resource will continue through 2011, but the company's most recent preliminary economic assessment indicates that annual REO production of 10,400 mtpa can be achieved with an initial 15-year mine life. We believe it is possible that the mine could ultimately be much larger, or host a deposit for a longer period of time, and assume a 25-year life in our model. In order to achieve initial production, we estimate that \$100 million in startup capital will need to be deployed. It should be noted that this initial estimate involves the sale of REO concentrate and not REO oxides, which require separation and further processing. Given our belief that concentrate will be worth substantially less than oxides, we anticipate that the company will pursue separation facilities and begin producing rare earth oxides in year 5 of operation. We expect this facility will add at least \$300 MM to the initial capex budget, and also estimate an additional \$165 in sustaining capital will be spent over the 25-year life (inclusive of separation facility sustaining capital). Based on the positive outlook from the preliminary economic assessment, a preliminary feasibility analysis consisting of two phases is now being conducted. This analysis will update the resource estimate, further metallurgical testing, and ultimately lead to final process and engineering designs and market/environmental studies. The expected cost of this analysis is \$15 million, which the company will be able to fund with cash on hand.

### **Bear Lodge Sundance Gold Project**

In June 2006, the company entered into an agreement with Newmont Mining to establish a joint gold exploration venture on the company's Bear Lodge property. Under the terms of the agreement, Newmont had the right to obtain a 65% interest in the project (excluding rights to rare earth elements and uranium). The parties signed an amendment in May 2010 giving the company 100% ownership rights to the claims in return for Newmont being given the right-of-first-refusal on all claims sold and a 0.5% royalty on all precious and base metals transferred by Newmont to the company. The company now stands to benefit from the approximately \$2.85 million spent by Newmont from 2006 to 2010 on the project. An inferred resource of 947,000 ounces at a 0.42 g Au/mt ore grade was recently estimated, and additional drilling and testing is ongoing. We note that this is a relatively small gold project, but we anticipate that the company will perform more exploration at this location and look to expand this asset in order to highlight its economic value.



## Exhibit 4: Site Map



Source: Rare Elements Resources Ltd

## Management

### Donald E. Ranta, President CEO & Director

Dr. Ranta has been with the company since October 2007 and has over 30 years of business experience. He is a former board member and President of the Society for Mining, Metallurgy & Exploration and currently serves as a board member and Vice President of the American Institute of Mining, Metallurgical and Petroleum Engineers. He has significant experience leading and directing exploration projects in Montana's McDonald gold and Mexico's Santa Gertudis gold deposits.

### Mark T. Brown, CFO and Director

Mr. Brown serves on the board and as President of Pacific Opportunity Capital Ltd, a consulting and merchant bank firm that is active in venture capital. Mr. Brown became a Chartered Accountant during his time at PriceWaterhouseCoopers and also serves as an officer/director at several other public and private companies in the minerals and exploration business.

**Jim Clark, Vice President, Exploration**

Dr. Clark has over 30 years of experience in the industry, and prior to joining the company worked for Molycorp and Hecla Mining Company. He served as senior geologist and exploration supervisor for Hecla and was involved with the identification of the current Bear Lodge REE resource. He currently owns and is the chief geologist of Applied Petrographics, a consulting company he founded in 1998 that provides microanalytical services to the mining industry.



## Valuation Methodology & Investment Risks

### Valuation Methodology

For companies with operating assets in the Metals & Mining space, we apply a multiple to our one-year forward EBITDA estimate to achieve our year-end price targets. Our applied multiple is based on historical industry-wide and company specific multiples. For Metals & Mining companies whose assets are primarily in pre-production, we apply an NAV analysis to future cash flows to achieve a one year forward price target.

### Investment Risks

The global macro economy poses the biggest risk to the Metals & Mining industry as demand for metals and minerals is highly correlated to economic growth. In particular, China is the world's largest consumer of aluminum, coal, copper, iron ore, nickel and steel. A material slowing in China's economic growth trajectory could result in lower prices for commodities. Further, with China being a significant producer of aluminum and steel, it is possible that the country may be less disciplined and export large quantities of these materials, further depressing global prices.

#### Primary Molybdenum Investment Risks include:

- ▶ Molybdenum prices remain significantly above their marginal cost of production, and over the long term, prices may return to a reasonable margin above cost.
- ▶ Roasting molybdenum produces carbon dioxide and sulfuric acid. Increased government regulation, with respect to the storage or sequestration of these materials, could negatively impact company economics.
- ▶ The widespread acceptance of a molybdenum substitute for molybdenum could negatively impact demand for the metal.

#### Primary Uranium Investment Risks include:

- ▶ The Japanese nuclear disaster intensifies in magnitude causing more countries to halt new reactor build rates or shut down reactors that are already operating.
- ▶ New technologies are developed to more efficiently recycle spent fuel, effectively increasing supply since fuel currently considered spent still contains significant amounts of fissile material that cannot currently be used with existing technology.
- ▶ Government entities liquidating stocks of highly enriched uranium from warhead stockpiles more quickly than forecast, thereby flooding the market with supply.

#### Primary Rare Earth Investment Risks include:

- ▶ In the past, China, which controls 97% of global supply, has flooded the market with rare earths, depressing the price. If China were to remove all export restrictions, it is possible that rare earth prices may fall beyond our expectations.
- ▶ If prices of rare earth elements continue to trend significantly higher, it is possible that substitution will begin to affect demand. For example, lithium batteries can be used as a substitute for nickel-metal hydride batteries, which use lanthanum.



- ▶ If national governments begin to classify rare earths as strategic assets and begin building stockpiles, uneconomical mining of rare earths may be subsidized in order to increase supply, and therefore pressuring prices.

### Company Specific Risks

We rate REE shares a Buy, with a \$21 price target based on our NAV analysis utilizing discounted free cash flows.

Risks to our rating:

- 1) The company does not anticipate production until 2015, and any production delays would materially impact our NAV
- 2) The possibility exists that an economically feasible outcome will not be realized for the Bear Lodge deposit, as further testing is still ongoing. The company will also need to secure additional financing to complete the project



## Disclosures

### Disclaimer:

The information presented in this report is for informational purposes only. It was prepared based on information and sources that we believe to be reliable, but we make no representations or guarantees as to the accuracy or completeness of the information contained herein. This report is not to be construed as an offer to sell or a solicitation of an offer to buy any security. The opinions expressed in this report may change without notice.

### Certification:

Each analyst identified in this report certifies in accordance with SEC Regulation AC, with respect to any company and securities discussed in this report, that the recommendations and opinions expressed accurately reflect the analyst's personal views and no part of the analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed herein.

### Required Disclosures:

No analyst who participated in the creation of this report owns securities issued by the subject company.

Dahlman Rose & Company, LLC, and/or its affiliates may have positions in the securities discussed in this report. However, none of those positions equal or exceed 1% of the equity securities outstanding for the subject company.

Dahlman Rose & Company, LLC, and/or any of its analysts, officers or employees, or any household members do not serve as an officer, director or advisory board member of any of the companies discussed in this report.

Dahlman Rose & Company, LLC has not provided investment banking services to the subject company in the past 12 months. It intends to seek to be a financial advisor or to engage in investment banking services with the subject company and may receive compensation for such services during the three months following publication of this report. As a result, investors should be aware that the firm might have a conflict of interest in the future that could affect the objectivity of this report.

Dahlman Rose & Company, LLC is not a tax or legal advisor and provides no legal or tax advice or opinions with respect to the securities recommended in this report.

Dahlman Rose & Company, LLC does not make a market in the securities of this issuer.

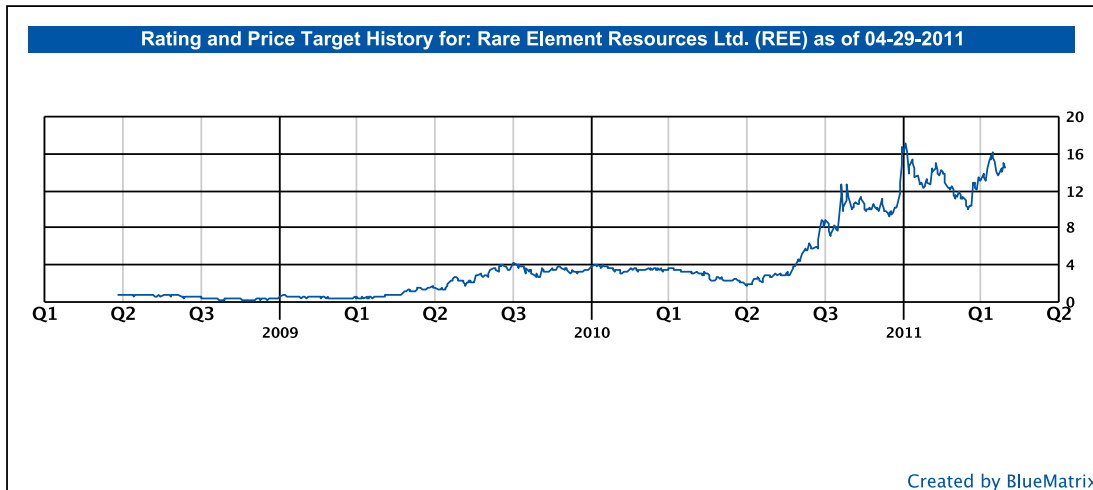
### Stock Ratings:

Dahlman Rose & Company, LLC assigns the following ratings to the securities of its subject companies:

**Buy** – The fundamentals/valuations of the subject company are *improving* and the investment return is expected to be 5 to 15 percentage points *higher* than the general market return.

**Sell** – The fundamentals/valuations of the subject company are *deteriorating* and the investment return is expected to be 5 to 15 percentage points *lower* than the general market return.

**Hold** – The fundamentals/valuations of the subject company are *neither improving nor deteriorating* and the investment return is expected to be *in line* with the general market return.



**Ratings Distribution:**

Ratings Distribution & Investment Banking Disclosure					
Rating	Count	Ratings Distribution*	Count	Investment Banking**	
Buy -rated	122	52.60	37	30.33	
Hold -rated	105	45.30	35	33.33	
Sell -rated	5	2.20	2	40.00	