

# Quest Releases a Revised and Substantially-Improved PEA Development Plan for its Strange Lake Project

09.04.2014 | [Marketwired](#)

TORONTO, ONTARIO--(Marketwired - Apr 9, 2014) - [Quest Rare Minerals Ltd. \(TSX:QRM\)\(NYSE MKT:QRM\)](#) is pleased to announce the completion of a Preliminary Economic Assessment ("PEA") based on Quest's revised and substantially-improved development plan for its Strange Lake Rare Earth Project. The new development plan significantly reduces the market, operational and financial risks of the Strange Lake Project. The PEA estimates construction capital costs of approximately \$1.321 billion (excluding the rare earth separation plant), a decrease of an approximately \$1.23 billion in construction capital from the pre-feasibility study published by Quest in October, 2013 ("PFS"), and savings of \$182 million in sustaining capital. These anticipated improvements will be further evaluated during the definitive Feasibility Study ("FS") to be initiated in the fall of 2014. A National Instrument 43-101("NI 43-101") compliant technical report summarizing the PEA, prepared by Micon International Limited ("Micon International"), has been filed under Quest's SEDAR profile at [www.sedar.com](http://www.sedar.com) and on EDGAR at [www.sec.gov/edgar](http://www.sec.gov/edgar). The PEA reflects Quest's revised development plan for the Strange Lake Rare Earth Project and, as such, it supersedes the PFS. **Quest will hold an analyst conference call at 2:00 p.m. (EDT) on April 10, 2014 to discuss the new PEA, to be hosted by Quest's management team. Quest invites all interested parties to participate in the call. Please find the details of the conference call at the end of this press release.**

"I am very pleased with the significant progress we have made since the release of the Strange Lake pre-feasibility study in late 2013. Our technical team under the leadership of Dr. Dirk Naumann has now engineered important efficiency improvements that will ensure not only the project's long-term potential viability, but make it a more attractive investment opportunity for all shareholders," said Quest President & CEO Peter Cashin. "The rare earth market stakeholders have suggested that Quest should work towards simplifying all aspects of the project scope and we have delivered on this with our PEA. Market demand for non-Chinese supply of these critical industrial materials continues to grow and Quest is poised to ultimately meet that demand."

## PEA Highlights (Table 1):

- Total project construction capital costs are \$1.631 billion, based on a minimum mine life of 30 years. This total incorporates the cost of a \$300 million separation plant (not previously included in the PFS)
- Cash operating costs average \$357 million per year, \$232/t milled or \$34.25/kg of product
- The project will generate an average \$758 million in revenue per year over the life of mine; 78% from sales of pure heavy rare earth and yttrium ("HREE + Y") metal oxides and 22% from pure light rare earth ("LREE") metal oxides
- Average annual product outputs of separated rare earth oxides are 4,404 tonnes (t) of HREE + Y and 6,019 t of LREE
- The PEA shows a robust internal rate of return (IRR) of 20.1% pre-tax and 16.7% post-tax
- The net present value ("NPV") of the project at a 10% discount rate is calculated to be \$1.42 billion pre-tax and \$788 million post-tax

The PEA further implements several of the process improvements identified in the PFS released by Quest in October 2013 and verified by exhaustive lab testing in January 2014. The development plan outlined in the PEA significantly reduces required capital expenditure, simplifies the process flow sheet, and reduces the project environmental footprint, all of which should enhance the long-term potential viability of the project. Quest remains convinced that this Made-in-Canada project has the potential to provide an important base for

establishing a major new North American industrial sector of global importance, and could help to address the market demand for non-Chinese supply of these elements which are critical to industry in the 21<sup>st</sup> century.

## Process Improvements

Quest has continued intensive metallurgical work to test and improve processes with SGS Lakefield Research, one of the world's leading metallurgical research laboratories, with extensive experience and expertise in rare earth process development. The results of this work have led to a critical simplification of Quest's previous process flow sheet assumptions and considerably reduced anticipated capital expenditures and operating costs for the project. Quest will now produce individual separated rare earth oxides as final products, from which 78% of annual revenue will be derived from heavy rare earths and yttrium.

The PEA proposes that a mineral flotation plant be located at the mine site to upgrade mined material, reducing the volume of material shipped to and processed at Bécancour, Québec. This plan will reduce the size and environmental footprint of the previously-contemplated hydrometallurgical plant. The combination of the simplified process and the establishment of the flotation plant can reduce residue volumes at the Bécancour site by 65%. The PEA includes a plant located in Bécancour to separate the suite of rare earth oxides as high-purity finished products.

The instability of the available rare earth market in China underlines the need for a dependable western supplier of these irreplaceable metals. China currently holds a near monopoly in the critical magnet-making business, with the exception of small amounts of production coming out of Japan and Germany. Major North American and European manufacturers of motors, wind turbines, and automobiles are concerned about this economic reality. The production by Quest of these critical elements coming from the Strange Lake deposit in Québec is intended to satisfy the demand needs of these large industrial companies.

## PEA - Key Metrics

The PEA is based on materials mined at Strange Lake, physically upgraded by a flotation concentrator located on site, trucked to Nain, Newfoundland and Labrador for shipment via the St. Lawrence River to Bécancour, Québec. The upgraded mineral concentrate will be processed at Quest's proposed hydrometallurgical plant at Bécancour and then separated into individual rare earth oxides. Table 1 shows key metrics for the project.

This preliminary economic assessment is preliminary in nature; it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

**Table 1: Key Metrics**

Metric	Amount	Units
Initial Capital Expenditure	\$1,631	\$million
Operating Cash Cost	\$357	\$million/year
Revenue	\$758	\$million/year
<b>Economics (Pre-Tax, unlevered)</b>		
IRR	20.1	%
NPV@8%	\$2,072	\$million
NPV@10%	\$1,416	\$million
NPV@12%	\$947	\$million
<b>Economics (Post-Tax unlevered)</b>		
IRR	16.7	%
NPV@8%	\$1,236	\$million
NPV@10%	\$788	\$million
NPV@12%	\$465	\$million
Payback Period (undiscounted)	5.3	years

Mining		
Material Mined	77.9	million t
Material Milled	46.1	million t
Production Rate	1.54	Million t/yr
Life of Mine (LOM)	30	years
Flotation concentrate shipped	578,000	t/yr
Revenue Break-down		
HREE + Y	\$593	\$million/yr
LREE	\$165	\$million/yr
Total	\$758	\$million/yr
Recoveries		
Beneficiation Plant	77.1	%
Hydrometallurgical Plant	80.3	%
Separation Plant	98	%
Production Volume		
HREE + Y	4,400	tonnes/yr
LREE	6,000	tonnes/yr
Total	10,400	tonnes/yr

1. Heavy Rare Earth Elements (HREE) include Eu, Gd, Er, Tb, Dy, Ho, Yb, Tm and Lu.
2. Light Rare Earth Elements include La, Ce, Nd, Sm and Pr.
3. All figures are expressed in Canadian dollars unless otherwise stated.

## Review of the PEA's Optimized Strategic Plan

The PEA's optimized strategic plan consists of:

- An open pit mine at Strange Lake.
- Beneficiation, crushing, milling and flotation concentration at Strange Lake.
- Transportation of the flotation concentrate by containers from Strange Lake via road and ship to Bécancour in southern Québec.
- Acid bake, water leaching ("ABWL") and direct precipitation at Bécancour to produce a mixed rare earth concentrate.
- Separation/refining of the concentrate to produce pure metal oxides.
- Residue management facilities at both Strange Lake mine site and the processing complex at Bécancour.

The revised flow sheet and operational plan has a number of substantial improvements over the previously defined flow sheet. These will include:

- Substantial reduction (71%) in materials being mined, resulting in lower mine capital and operating costs.
- Virtually no stockpile of mined material at the end of the contemplated mine life, reducing reclamation, mine closure costs and lowering the environmental footprint.
- The flotation plant at mine site creates a concentrate with a relatively constant quantity of contained metal.
- The plant reduces the volume of material being transported and the mass of material entering the hydrometallurgical plant, contributing to lower capital costs. The consistent grade of the concentrate will also simplify the hydrometallurgical plant operations.
- A greatly simplified process at Bécancour results in a purer mixed rare earth element ("REE") concentrate; most impurities, zirconium and niobium are precipitated out in the residue, eliminating the need for a complex and costly solvent extraction circuit.
- A separation plant is added to separate the mixed REE concentrate into pure metal oxides. The separation plant enables Quest to eliminate the price discount inherent from selling the product as a mixed REE concentrate. This means Quest can provide the specific metal oxides to the customer base.
- The separation plant, which was not previously assumed, costing an additional \$300 million (including indirect and contingency costs), is included in the CAPEX estimate.
- The plan reduces operating costs by \$75 million per year compared to the PFS (\$164 million operating cost savings versus the comparable PFS flow sheet).
- The development plan produces a constant, to slightly rising, volume of pure rare earth oxides each year over the life of mine.

These improvements will make the project more robust over time, serve to protect it against price fluctuations and significantly reduce the technical risk associated with some rare earth projects.

## **Further Operational Improvements and Industry Partnerships**

Quest has identified a number of additional operational improvements to the base case assumptions presented by the PEA, which are intended to further reduce project capital and operating costs and increase product yields.

### **1. Strategic Business Plans**

The PEA assumes that Quest will execute and operate all aspects of the Strange Lake project within a single corporation. However, Quest recognizes that there may be certain financial advantages to structuring the project in separate corporate entities. These entities would include a mining company, a transport and logistics company, a materials-processing company and a separation and refining company, either as wholly-owned subsidiaries of Quest or as joint ventures with industrial partners. There are a number of potential advantages to such an arrangement, including the opportunity to partner with specialized processing or transportation and logistics providers.

In addition, the PEA assumes the construction of a port facility (along with storage and accommodation facilities) in northern Labrador. There is an opportunity to share with an existing port facility nearby and preliminary discussions to this end are ongoing. The capital cost of the port is \$85 million (including indirect and contingency costs).

### **1. Process Improvements**

There are a number of process improvements in the baking, leaching and direct precipitation processes which are currently being investigated and tested at SGS in Lakefield, Ontario. These would further lower throughput times, operating costs as well as capital requirements in the metallurgical plant.

In addition, an investigation of sensor ore-sorting, based on radiometric and photometric characteristics of the mineralized material, is being carried out at the Helmholtz Institute for Resource Technology in Germany. If successful, such sorting could be installed at the Strange Lake site and represent further improvement to the project flow sheet.

### **1. Industry Partnerships**

Quest has begun discussions aimed towards establishing an industry partnership with rare earth separation/refining companies. Quest would acquire separation technology and the related intellectual property and the partner in return would assist in the process of building the separation facility at Bécancour. The PEA assumes that a separation plant is built at the same time as the metallurgical plant.

In the event that all of these potential plans are successfully executed, the initial Quest capital requirement could be reduced to just under \$1 billion.

In addition, the development plan is sufficiently flexible to allow for expansion of production capacity to meet future rare earth supply demand.

## **Next Steps and Feasibility Study**

Additional pilot test work and further work at the mini pilot plant at SGS is intended to evaluate optimization opportunities in advance of the planned launch of a large scale pilot program. It is expected that this demonstration unit will be installed as Quest begins its feasibility work. Quest plans to run the demonstration unit with a mineralized material throughput of 500 kg/d to 1 t/d to demonstrate all of the key process steps on a continuous basis. Quest expects the remaining technical test work to be completed by the fall of 2014 when the definitive feasibility study work will begin.

Quest's next key step is completion and submission of the project description which then starts the Environmental Impact and Assessment process ("EIA"). Quest intends to continue to pursue key identified strategic business opportunities and industry partnerships throughout 2014.

### Project Development - Timeline

Quest has established a proposed timeline for execution on its development plan (Table 2). Several of these initiatives are underway with the goal of delivering first product from Strange Lake in 2019.

**Table 2: Timeline**

Submission of EIA project description	Q3 2014
Start feasibility study	Q4 2014
Start detailed design and engineering	Q1 2015
Submission of EIA report	Q4 2015
Approval of EIA	Q4 2016
Delivery of construction permits	Q1 2017
Start of construction	Q1 2017
First flotation concentrate shipment	Q2 2019
Start of plant commissioning	Q2 2019

### General Project Description

The Strange Lake project is located in northern Québec. Quest owns 100% of the mineral claims comprising the project. The Strange Lake project consists of 534 individual mineral claims covering a total area of approximately 23,230 hectares and is situated approximately 1,100 km northeast of Québec City, the capital of Québec. The project area is accessible by fixed-wing aircraft or helicopter from Schefferville, Québec, or from Nain or Happy Valley-Goose Bay, Newfoundland and Labrador. Vale's nickel-copper mine at Voisey's Bay is the closest mine, located approximately 125 km east of Strange Lake, on the Labrador coast.

### Mineral Resource

The estimate of mineral resources was prepared by Micon International, in respect of which a report was filed on SEDAR on December 17, 2012. The B-Zone deposit currently has an indicated resource of 278,128,000 t at 0.93% TREO, 1.92% zirconium oxide, and 0.18% niobium pentoxide, and an inferred resource of 214,351,000 t at 0.85% TREO, 1.71% zirconium oxide and 0.14% niobium pentoxide.

**The Strange Lake Project no longer contains mineral reserves under this PEA. Mineral resources that are not mineral reserves do not have demonstrated economic viability.**

### Mine Plan

The Strange Lake B-Zone mine is designed to be a standard truck and shovel open pit operation targeted to exploit the highest REE grades possible for the first 20 years of production. The mine plan includes some modest stockpiling of mined material to a maximum of 32 million tonnes which is run down over the last 6 years of the 30 year mine life (mining stops in year 24). Total amount of indicated mineralized material mined over life of mine will be 56.5 million t, and 0.8 million t of inferred mineralized materials will be mined over the same period.

The mine is designed to feed an average of 1,538,000 t of mined material per year to the mill for a minimum 30 year mine life (the mined material is crushed and wet milled at Strange Lake). The Life of Mine mining average is shown in Table 3 below:

**Table 3: LOM Mining Average**

Total Tonnage Mined	2,595	000 t/yr
---------------------	-------	----------

Tonnage Fed to Mill	1,538	000 t/yr
Operating Period	270	d/yr

## Flotation Plant

The PEA proposes the construction of a flotation plant at the mine site. The flotation plant will process run of mine material in a simple rougher circuit to produce a flotation concentrate enriched in rare earths and yttrium. Residues from the flotation circuit will be treated and disposed of in an engineered facility. The flotation concentrate is de-watered by steam pressure filtration and loaded into containers for shipping by truck to the Labrador port, where the containers are loaded onto ships for transport to feed the processing plant in southern Québec. The flotation plant will output a constant tonnage of contained rare earth oxide to minimize fluctuations in production.

## Hydrometallurgical Plant and Separation Plant

The PEA includes the construction of both a hydrometallurgical plant and rare earth separation plant at the Bécancour processing facility, which will process the flotation concentrate shipped from Strange Lake and produce separated rare earth oxide products.

The PEA provides that at the Bécancour site, flotation concentrate from the Strange Lake mine site is dried before being mixed with sulfuric acid. The acid and mineralized material mixture proceeds to the thermal sulfation process. Excess acid is recovered and recycled back into the thermal sulfation step.

The PEA also provides that dry sulfated material proceeds to water leach, where the rare earth sulfates are dissolved. The sulfation stage is controlled to minimize recovery of deleterious elements, including iron and aluminum, to solution, and also to minimize the level of free acid. The leach slurry is pressure filtered to collect the pregnant leach solution (PLS) which is fed to the impurity removal circuit.

In impurity removal, the pH of the PLS is increased by addition of magnesium oxide (MgO) to effect the selective precipitation of most of the residual impurities (primarily iron, aluminum, zirconium, titanium, and thorium) that remain in the solution after leaching. The precipitate slurry is thickened, and the thickener underflow proceeds to filtration. The filtered precipitate is washed, and the filtrate combined with the thickener overflow to form the feed to a crude rare earth concentration circuit.

In the PEA, impurity precipitation thickener overflow and filtrate, now substantially free of most major impurities (iron, aluminum, zirconium, thorium, niobium, and titanium) is treated in the crude concentrate precipitation circuit to produce an intermediate crude rare earth concentrate. Additional MgO is added to further increase the pH and effect the precipitation of the rare earths. The thickener underflow containing the rare earth precipitate is filtered and the filtrate combined with the thickener overflow to proceed to waste stream treatment.

Crude rare earth concentrate is re-leached, and the rare earths re-precipitated to form a mixed rare earth oxalate. The mixed oxalate is calcined to form a mixed rare earth oxide feed to the separation plant.

The barren solutions and solids are combined for treatment, primarily with lime. The treated combined residue is dewatered and residue solids are dry-stacked in an engineered site located near the processing plant.

In the separation plant, the mixed oxide is digested and fed to a series of solvent extraction batteries. Through a series of sequential extraction and stripping circuits, individual rare earth strip solutions are produced, from which rare earths are precipitated. The individual precipitated rare earths are calcined to produce the final separated oxide products for market.

## Project Infrastructure

The PEA provides that the Strange Lake mine site facilities will be comprised of an accommodation camp,

milling and beneficiation plant, multi-functional building and maintenance workshop. Access roads will link the open pit mine to mine facilities, mineralized material stockpiles, waste rock storage, residue management facility, landfill site and airstrip. The port and mine site will be linked by an all-weather gravel access road, constructed over a 168 km distance of flat to hilly terrain. Several port location options are considered in the PEA. The preferred port option includes a floating pier which can receive both smaller vessels and barges that have significantly shallower drafts, allowing the pier to be located close to the shoreline. At the FS stage, more extensive study will serve to validate and confirm specific port site requirements and configurations.

The PEA provides for the processing infrastructure, which includes the process plant itself and the industrial residue containment facility, to be located in Bécancour. The process plant site will include storage, flotation concentrate stockpiles, utilities and supporting systems. The residue containment facility will include the residue storage structure and the dewatering building and related ponds and piping between the two lots.

## Capital Expenditure

The PEA estimates the initial start-up capital expenditure to be \$1.63 billion (Table 4). The average sustaining capital requirements for the operation (mine and plant) is estimated to be \$18 million per year, beginning in the second year of production. The initial capital cost includes a 16% contingency of \$221 million.

**Table 4: Capital Expenditure**

Area	Capital Cost (\$M)
Strange Lake Mine Site	201.0
Mine Access Road	228.3
Edward's Cove Port	52.8
Bécancour Process Plant	127.4
Bécancour Direct Precipitation	72.6
Bécancour Balance of Plant	88.6
Bécancour Residue Disposal Site	41.1
Bécancour Separation/Refinery	190.4
Indirect Costs	407.0
Contingency	221.4
<b>Total</b>	<b>1,631.0</b>

## Operating Cost

The average total annual operating cash cost (Table 5) is estimated at \$357 million (assuming operating 350 days per year). At a nominal production rate of 30 t per day of HREE+Y+LREE, an estimated combined annual total of 10,423 t of product will be produced.

**Table 5: Operating Cost**

Area	LOM Operating Cost (\$M)	Avg. Annual Cost (\$M)	Unit Operating Cost (\$/t milled)	Unit Operating Cost (\$/t flotation concentrate)	Unit Operating Cost (\$/t production)
Mining	654	21.8	14.18	38.38	2,092
Beneficiation	1,002	33.4	21.71	58.77	3,203
Flotation con. transport	1,625	54.2	35.23	95.37	5,198
Processing	6,595	219.8	142.95	386.96	21,092
G&A (site costs)	315	10.5	6.84	18.50	1,009
Off-site costs	519	17.3	11.24	30.44	1,659
<b>Total</b>	<b>10,710</b>	<b>357</b>	<b>232.15</b>	<b>628.42</b>	<b>34,254</b>

## Annual Production Levels and Sale Prices

The expected average annual production of rare earth oxides ("REOs") over the 30 year initial mine life is set out in Table 6 below:

**Table 6: Annual Production Levels**

Annual Production (t)			
Pure Metal Oxide	Minimum	Maximum	Life-of-Mine Average (30 years)
Lanthanum (La <sub>2</sub> O <sub>3</sub> )	985	1,908	1,287
Cerium (CeO <sub>2</sub> )	2,363	4,176	2,975
Praseodymium (Pr <sub>6</sub> O <sub>11</sub> )	266	460	331
Neodymium (Nd <sub>2</sub> O <sub>3</sub> )	928	1,579	1,145
Samarium (Sm <sub>2</sub> O <sub>3</sub> )	249	349	281
Europium (Eu <sub>2</sub> O <sub>3</sub> )	15	18	16
Gadolinium (Gd <sub>2</sub> O <sub>3</sub> )	267	325	283
Terbium (Tb <sub>4</sub> O <sub>7</sub> )	62	66	63
Dysprosium (Dy <sub>2</sub> O <sub>3</sub> )	418	427	419
Holmium (Ho <sub>2</sub> O <sub>3</sub> )	89	95	92
Erbium (Er <sub>2</sub> O <sub>3</sub> )	264	293	277
Thulium (Tm <sub>2</sub> O <sub>3</sub> )	39	45	42
Ytterbium (Yb <sub>2</sub> O <sub>3</sub> )	229	276	250
Lutetium (Lu <sub>2</sub> O <sub>3</sub> )	31	40	35
Yttrium (Y <sub>2</sub> O <sub>3</sub> )	2,816	3,057	2,928

REEs are critical manufacturing inputs for a variety of products, such as magnets, batteries, wind turbines, fuel cells for electric vehicles, automotive catalyst systems, catalysts in petrochemical distillation cracking towers, fluorescent lighting tubes and most display panels. There is virtually no substitute for the use of REEs in a wide range of technologies. Many national defense systems are also REE dependent, including guided missile systems, smart bombs, advanced sonar, secure communication, advanced armor and stealth technologies, making long-term consistent North American REE production strategically significant from a national defense standpoint. There is currently almost no open market for individual REEs. Prices for the heavy REEs, which are mainly produced in China, are set by the suppliers based on Chinese government industrial policies. China has dominated the global supply of rare earths since the mid-1990s, supplying close to 90% of the global demand.

Global trends which have strongly influenced the growing demand for rare earths are miniaturization, particularly of consumer electronic devices, automotive emissions control and energy efficiency. Complicating the picture is the general shift of manufacturing away from the United States, Europe and Japan to China, South Korea and elsewhere. Demand for rare earths within China has grown significantly over the past ten years. Chinese industry is a major user of neodymium, terbium, dysprosium and yttrium in its domestic manufacturing and the Chinese government continues to seek secure supplies of these materials for its own industries. Chinese price setting and reduction of supply is part of this strategy, leading to a deficit in future availability. Strategic North American and European industries, such as the defense industry, are vulnerable to Chinese dominance in REE supply.

The price assumptions used in the PEA (Table 7) for the separated rare earth oxides are based on consensus averages by industry peers from 2013 data, current market prices and data from industry experts. Quest has contracted a study from Roskill Consulting Group (January./August. 2013) for supply and demand forecasts to 2017 and beyond. Other sources consulted for rare earth pricing data include Metal Pages, Asian Metals, key industrial end users and leading research analysts in the rare earth sector. The rare earth oxide prices used in the PEA are listed in Table 7 below.

**Table 7: Rare Earth Oxide Prices**

	US\$/kg <sup>(1)</sup>
Lanthanum (La)	\$9
Cerium (Ce)	\$8
Praseodymium (Pr)	\$85
Neodymium (Nd)	\$80
Samarium (Sm)	\$9
Europium (Eu)	\$1,000
Gadolinium (Gd)	\$40
Terbium (Tb)	\$950

Dysprosium (Dy)	\$650
Holmium (Ho)	\$55
Erbium (Er)	\$70
Thulium (Tm)	\$1,000
Ytterbium (Yb)	\$50
Lutetium (Lu)	\$1,100
Yttrium (Y)	\$30

1. All amounts in the table above are in U.S. dollars per kilogram of oxide.

## Potential Employment and Skill Requirements

The PEA provides that the Strange Lake project will employ a total of 689 employees, comprised of 306 employees at the mine site, 342 at the processing plant in southern Québec and 41 for general administration. Quest will employ engineers, metallurgists and geologists who will require undergraduate and/or post-graduate degrees. Administrative and support staff with undergraduate and/post-graduate degrees will also be employed within finance, human resources, procurement and emergency services.

## Sensitivity Analysis

The PEA includes an extensive sensitivity analysis on the key parameters of the Strange Lake project. The parameters to which project economics are most sensitive are outlined in Table 8 below.

**Table 8: Sensitivities**

Parameters	Change	IRR Impact After Tax (%)
Product Prices	10%	2.8
Capital Expenditure	10%	1.3
Yield/Mineral Recoveries	3%	0.8
Ramp-Up Time	3 yrs vs 2 yrs	2.2

The ABWL and direct precipitation plants represent 37 % of cash operating costs. Project economics are less sensitive to changes in plant cash operating costs - a 10% change in these costs changes project IRR by 0.6%.

Transport and logistics represent 16% of the cash operating costs and, as a result, project economics are moderately sensitive to changes in transport and logistics costs - a 10% change in transport and logistics costs leads to a 0.3% change in project IRR.

Reagents or chemicals used in the processing and separation plants are a significant component (36%) of total project cash operating costs. However, a 10% change in the quantity used or the price of these reagents changes the project IRR by only 0.6%.

With respect to the operational components of the project, the mine comprises a relatively small percentage (6%) of the overall cash operating costs. As a result, the project economics are almost completely insensitive to changes in mining costs - mining cash costs would have to increase by more than 70% to reduce the project IRR by 1%.

The project is largely insensitive to changes in labour, energy or material consumables costs.

The sensitivity analysis provides Quest with a mechanism to focus on improvement measures including those referred to above, which will influence either project economics and/or reduce project sensitivity to parameter changes.

## Environment and Social Acceptability

Quest has retained AECOM to produce both the environmental baseline studies for the proposed project

infrastructure at Strange Lake, as well as the baseline study for the proposed metallurgical plant, residue storage area and associated infrastructure at Bécancour. Both of these studies are anticipated to be completed later this year. The project description is being prepared; Quest envisions commencement of the Environmental Impact Assessment (EIA) later this year, after the submission of the project description to the relevant government authorities.

The project team is proactively considering the appropriate mitigation and monitoring plans to lessen the environmental impact of mining. This strategic approach has led to the potential reduction of the project's environmental footprint in Bécancour, and the elimination of stock piling at the Strange Lake mine site. These improvements have also helped to improve the efficiency and sustainability of the Strange Lake project.

### **Social Acceptability**

An essential part of Quest's development plan has always been about being socially and environmentally responsible. Quest continues to focus on the protection of the environment which includes sensitive wildlife around the Strange Lake site, actively involving local aboriginal workers in its development environmental teams. The Impact and Benefit Agreements (IBA) process is ongoing, with both aboriginal and government stakeholders being provided regular updates on the project.

### **NI 43-101 Technical Report and Qualified Persons**

The NI 43-101 technical report supporting the PEA has been prepared by Micon International under the guidance of Richard Gowans, P. Eng., President of Micon International, who is the Qualified Person for the NI 43-101 technical report. Mr. Gowans has reviewed and approved the PEA information described in this news release.

William J. Lewis, P. Geo., Senior Geologist with Micon International, is the Qualified Person responsible for the preparation of the mineral resource estimate described in this news release. The effective date of the resource estimate is August 31, 2012. The NI 43-101 technical report supporting the foregoing resource estimate is available under Quest's profile on SEDAR and EDGAR.

### **Quest Conference call details:**

Date: April 10, 2014

Time: 2:00 p.m. ET

Participant dial-in number(s): 416-340-2216 Toronto and International / 866-226-1792 North American Toll Free

A live webcast of the call can be accessed through Quest's website at [www.questrareminerals.com](http://www.questrareminerals.com). An archive of the webcast will be available after the call.

If you are unable to participate in the conference call, a replay will be available by dialing 905-694-9451 Toronto and International / 800-408-3053 North American Toll Free and entering passcode 1808007. The replay will be available until April 17<sup>th</sup>, 2014. An audio recording will be available on the Company's website within 24 hours of the completion of the call via the webcast.

### **About Quest**

*[Quest Rare Minerals Ltd.](http://www.questrareminerals.com) ("Quest") is an integrated Canadian-based development company focused on the advancement of its flagship Strange Lake property (rare earth-zirconium-niobium) in northeastern Québec and the construction of a processing facility in Bécancour, Québec. Quest is publicly listed on the TSX and*

NYSE MKT as "QRM" and is led by a highly-experienced management and technical team with a proven track record. Quest believes that its Strange Lake project has the potential to become an important long-term supplier of rare earth elements (REE). In addition, Quest has announced the discovery of an important new area of REE mineralization on its Misery Lake project, approximately 120 km south of the Strange Lake project in northeastern Québec, and is advancing the Misery Lake project. Quest continues to pursue high-value project opportunities throughout North America.

## **Forward-Looking Statements**

*This news release contains statements that may constitute "forward-looking information" or "forward-looking statements" within the meaning of applicable Canadian and U.S. securities legislation. Forward-looking information and statements may include, among others, statements regarding the future plans, objectives or performance of Quest, including, the Strange Lake Rare Earth Project's technical and pre-economic feasibility based on the results of the PFS and PEA, the key metrics and economics reported in the PEA, the operational improvements and industry partnerships, process improvements, capital expenditure, operating cost, annual production, timelines, capital and sustaining costs, life of mine, social, community and environmental impacts, mineral resource and mineral reserve estimates, rare metal markets and sales prices, environmental assessment and permitting, securing sufficient financing on acceptable terms, continued positive discussions and relationships with local communities and stakeholders or the assumptions underlying any of the foregoing. In this news release, words such as "may", "would", "could", "will", "likely", "believe", "expect", "anticipate", "intend", "plan", "estimate" and similar words and the negative form thereof are used to identify forward-looking statements. Forward-looking statements should not be read as guarantees of future performance or results, and will not necessarily be accurate indications of whether, or the times at or by which, such future performance will be achieved. No assurance can be given that any events anticipated by the forward-looking information will transpire or occur, including the development of the Strange Lake Rare Earth Project, or if any of them do so, what benefits Quest will derive.*

*Forward-looking statements and information are based on information available at the time and/or management's good-faith belief with respect to future events and are subject to known or unknown risks, uncertainties, assumptions and other unpredictable factors, many of which are beyond Quest's control. These risks, uncertainties and assumptions include, but are not limited to, estimates relating to capital costs and operating costs based upon anticipated tonnage and grades of resources to be mined and processed and the expected recovery rates, together with those described under "Risk Factors" in Quest's annual information form dated January 24, 2014, and under the heading "Risk Factors" in Quest's Management's Discussion and Analysis for the fiscal year ended October 31, 2013, both of which are available on SEDAR at [www.sedar.com](http://www.sedar.com) and on EDGAR at [www.sec.gov](http://www.sec.gov), and could cause actual events or results to differ materially from those projected in any forward-looking statements. Quest does not intend, nor does Quest undertake any obligation, to update or revise any forward-looking information or statements contained in this news release to reflect subsequent information, events or circumstances or otherwise, except if required by applicable laws.*

## **Cautionary Note to U.S. Investors Concerning of Resources Estimates**

*Unless otherwise indicated, all resource estimates and other technical information included in this press release have been prepared in accordance with National Instrument 43-101. NI 43-101 is a rule developed by the Canadian Securities Administrators which establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Canadian standards for disclosure of information, including NI 43-101, differ significantly from the requirements of the United States Securities and Exchange Commission (the "SEC"), and reserve and resource information contained in this press release may not be comparable to similar information disclosed by United States companies. In particular, and without limiting the generality of the foregoing, the term "resource" does not equate to the term "reserve". Under United States standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. The SEC's disclosure standards normally do not permit the inclusion of information concerning "measured mineral resources", "indicated mineral resources" or "inferred mineral resources" or other descriptions of the amount of mineral in mineral deposits that do not constitute "reserves" by United States standards in documents filed with the SEC. The requirements of NI 43-101 for identification of "reserves" are also not the same as those of the SEC. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in accordance with United States standards.*

## Contact

Peter J. Cashin  
President & CEO  
Tel: (416) 916-0777 or 1-877-916-0777  
(416) 916-0779  
E-mail: [info@questrareminerals.com](mailto:info@questrareminerals.com)  
URL : [www.questrareminerals.com](http://www.questrareminerals.com)

---

Dieser Artikel stammt von [Rohstoff-Welt.de](http://Rohstoff-Welt.de)

Die URL für diesen Artikel lautet:

<https://www.rohstoff-welt.de/news/170591--Quest-Releases-a-Revised-and-Substantially-Improved-PEA-Development-Plan-for-its-Strange-Lake-Project.html>

Für den Inhalt des Beitrages ist allein der Autor verantwortlich bzw. die aufgeführte Quelle. Bild- oder Filmrechte liegen beim Autor/Quelle bzw. bei der vom ihm benannten Quelle. Bei Übersetzungen können Fehler nicht ausgeschlossen werden. Der vertretene Standpunkt eines Autors spiegelt generell nicht die Meinung des Webseiten-Betreibers wieder. Mittels der Veröffentlichung will dieser lediglich ein pluralistisches Meinungsbild darstellen. Direkte oder indirekte Aussagen in einem Beitrag stellen keinerlei Aufforderung zum Kauf-/Verkauf von Wertpapieren dar. Wir wehren uns gegen jede Form von Hass, Diskriminierung und Verletzung der Menschenwürde. Beachten Sie bitte auch unsere [AGB/Disclaimer!](#)

---

Die Reproduktion, Modifikation oder Verwendung der Inhalte ganz oder teilweise ohne schriftliche Genehmigung ist untersagt!  
Alle Angaben ohne Gewähr! Copyright © by Rohstoff-Welt.de -1999-2026. Es gelten unsere [AGB](#) und [Datenschutzrichtlinien](#).