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# **NEWS RELEASE**

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# Avalon provides update on progress on the Nechalacho Rare Earth Elements Project, Thor Lake, NWT

Toronto, ON - <u>Avalon Rare Metals Inc.</u> (<u>TSX</u> and <u>NYSE MKT</u>: AVL) ("Avalon" or the "Company") is pleased to report on recent progress at its 100% owned Nechalacho Rare Earth Elements Project (the "Project") located at Thor Lake in the Northwest Territories ("NWT"), Canada.

Most of the technical work programs planned to optimize the 2013 Feasibility Study have been completed and an updated feasibility study is in preparation. Completion of this study awaits a decision on a location for the hydrometallurgical plant and revised cost estimates for this facility. The only significant technical work remaining is to carry out a pilot plant trial of the new hydrometallurgical process flowsheet to finalize engineering and plant design criteria. A bulk sample of Basal Zone material required for this work has been recovered and the trial will proceed once arrangements with a suitable facility are confirmed and the funding required (in the order of \$4 million) is in place.

Efforts to arrange Project financing and product off-take agreements continue along with Project implementation planning and permitting. Depressed commodity prices generally and reduced demand for rare earths in particular, have made accessing capital for large scale resource development projects like Nechalacho very challenging in recent months. However, the Company remains optimistic that rare earth demand will recover sufficiently in 2015 to attract Project financing and allow construction work to begin by next summer.

## **NECHALACHO SITE WORK**

A one-month drilling program was completed at the Nechalacho site in August to acquire further bulk sample for future metallurgical pilot plant purposes. Seven large diameter PQ drill holes totalling 1,773 metres were completed, resulting in 3 tonnes of Basal Zone ore material being collected. This brings the total bulk sample now in inventory to approximately 8 tonnes. The material is being stored in Yellowknife and Lakefield, ON. The drill core was also assayed for rare earths as usual and the data will be included in the resource model.

The only other significant work done at the site in 2014 was a program of tree clearing to prepare several areas for initial construction work. These areas are for the planned fuel storage site and the accommodations, the ramp portal site and an area that will be used as a quarry. This will enable immediate start-up on the construction of a larger camp and the driving of the underground ramp once permits and financing are in place. The exploration camp is being

closed for the winter as no further drilling or site development work is planned before next summer.

#### **METALLURGY**

Metallurgical testwork on a number of optimization processes for both the concentrator and hydrometallurgical plants is essentially complete. Recent investigations on the flotation circuit in the concentrator has raised the total rare earth oxide ("TREO") flotation recovery to >91.5% (vs. the 89% reported December 2013 and the 78% in the Feasibility Study).

Testwork on the hydrometallurgical process has further improved overall heavy rare earth oxide ("HREO") recoveries to >93% and, more importantly, has established cost-efficient processes for recovering and recycling approximately 80% of the hydrochloric acid ("HCI"), 90% of the magnesia and 100% of the limestone additions. Further work on recovering a readily marketable zirconium chemical product (zirconium basic sulphate) has been successful.

A final pilot plant trial of the complete process flow sheet will be conducted using the bulk sample material now in inventory once Project financing is in place. This integrated pilot plant will combine all the unit operations already developed and proven in mini-pilot campaigns plus include the reagent recovery and recycle processes to confirm the suitability of the recycled reagents. It will also generate additional operating and engineering design data. A suitable facility has been identified and a preliminary budget has been developed with an estimated total cost of \$4 million.

#### **ENGINEERING AND PROJECT SCHEDULE**

Engineering work for the mine and concentrator is complete and revised capital and operating costs are currently being finalized. The process design for the final hydrometallurgical plant is being updated with all the final test results, however work on engineering and costing has been placed on temporary hold pending a final decision on the location for the hydrometallurgical plant. The original proposed site for the hydrometallurgical plant (used in the Feasibility Study) was Pine Point, NWT but the new process design involves significant additional infrastructure requirements and chemical reagents that are presently unavailable in the NWT.

Avalon currently has an option on a parcel of land in Geismar, Louisiana (originally considered for the proposed rare earths refinery) that could also accommodate the new hydrometallurgical plant design. However, it has the disadvantage of high transportation costs for the large volumes of mineral concentrate that need to be shipped there by rail. Accordingly, Avalon has been investigating less remote alternative potential sites in western Canada for the facility with emphasis on industrial locations in Saskatchewan. Several attractive locations have been identified that can meet the necessary infrastructure requirements.

The Company has also been in discussions with several suppliers of chemical reagents in this region and management is confident that a cost effective solution is available. A decision on a hydrometallurgical plant site location will be made upon completion of due diligence investigations into the three most promising potential Saskatchewan locations. This information

is needed in order to complete the revised cost estimates being developed for the updated Feasibility Study and the study will be completed once this information is in hand.

The overall Project development schedule remains at approximately three years, commencing from whenever Project financing is in place to allow construction to begin.

#### **ENVIRONMENTAL AND PERMITTING**

Since receiving its Type A Land Use Permit ("LUP") in April 2014 from the Mackenzie Valley Land and Water Board ("MVLWB"), Avalon also received its Type B Water Licence ("WL") in May. In addition, all necessary associated environmental management plans have been approved. These authorize Avalon to complete, in a phased approach, low impact activities including site preparation, early camp erection, portal development and associated infrastructure upgrades such as roads, power and water treatment. These pre-construction activities would take approximately one year to complete and are ready to begin once Project financing is in place.

Technical review sessions related to the full ("Type A") Construction and Operations LUP and WL were held in Yellowknife on July 22 to 24, 2014 and Avalon has since responded to all requests for additional information. Next steps include further community engagement work, finalizing comprehensive construction and operations environmental management plans and responding to recent comments received from interveners in the MVLWB permitting process. The final public hearings will be scheduled in early 2015 once this work has been completed.

#### RARE EARTH MARKET UPDATE

In 2010, China reduced export quotas for rare earths by 70%, initiating a period of increasing prices for rare earths and significant concern in the rest of the world about its reliance on China as a sole source of supply of these critical raw materials. Global demand at that time was 123,000 tonnes, according to one independent market analyst in Australia (IMCOA). By 2013, it was reported that global demand had fallen to 115,000 tonnes due to increased substitution, recycling, inventory drawdowns from stockpiles and more efficient use of rare earths by consumers, as well as a slowdown in the overall global economy.

Prices for rare earths have fallen from the peaks reached in 2010-11; however, prices remain well above pre-2010 levels. IMCOA forecasts that global demand for rare earths will increase to 152,500 tonnes in 2017 and to 190,000 tonnes by 2020: driven largely by demand in the high strength permanent magnet market. However, an oversupply of the two most abundant light rare earths (La and Ce) is forecast in 2017 continuing to 2020, while a deficit is forecast for those rare earths in higher demand: notably Pr, Nd, Eu, Tb and Dy. If new supply sources do not soon emerge for these "critical" rare earths, then it is inevitable that there will be upward pressure on prices again before long.

In the meantime, governments in all western industrialized countries remain very concerned about security of supply of critical raw materials and remain committed to enabling the development of a rare earths supply chain outside China. Avalon is involved in efforts through industry associations such as the Canadian Rare Earth Elements Network ("CREEN") and the

Rare Earth Technology Alliance ("RETA") to create more awareness among policy makers and among major industrial consumers about the urgency for taking action now to avoid a repeat of the high price volatility and supply shortages of rare earths witnessed in 2010-11.

The technical information contained in this document has been reviewed and approved by Donald Bubar, P. Geo. (ONT), CEO and President of Avalon, a qualified person for the purposes of National Instrument 43-101.

### About Avalon Rare Metals Inc.

Avalon Rare Metals Inc. is a mineral development company focused on rare metal deposits in Canada, with three advanced stage projects. Its 100%-owned Nechalacho Deposit, Thor Lake, NWT is exceptional in its large size and enrichment in the scarce "heavy" rare earth elements, key to enabling advances in clean technology and other growing high-tech applications. Avalon is also advancing its Separation Rapids Lithium Minerals Project, Kenora, ON and its East Kemptville Tin-Indium Project, Yarmouth, NS. Social responsibility and environmental stewardship are corporate cornerstones.

For questions and feedback, please e-mail the Company at <u>ir@avalonraremetals.com</u>, or phone Don Bubar, President & CEO at 416-364-4938.

This news release contains "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities legislation. Forward-looking statements include, but are not limited to, statements that the pilot plant trial will proceed once arrangements with a suitable facility are confirmed and the funding required is in place, that the Company is optimistic that rare earth demand will recover sufficiently in 2015 to attract Project financing and allow construction work to begin by next summer, pre-construction activities would take approximately one year to complete, confident that a cost effective solution is available, a decision on a Hydrometallurgical plant site location will be made upon completion of due diligence investigations into the three most promising potential Saskatchewan locations, the final public hearings will be scheduled in early 2015 and if new supply sources do not soon emerge for "critical" rare earths, then it is inevitable that there will be upward pressure on prices again before long. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "potential", "scheduled", "anticipates", "continues", "expects" or "does not expect", "is expected", "scheduled", "targeted", "planned", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be" or "will not be" taken, reached or result, "will occur" or "be achieved". Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Avalon to be materially different from those expressed or implied by such forward-looking statements. Forwardlooking statements are based on assumptions management believes to be reasonable at the time such statements are made. Although Avalon has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or intended. Factors that may cause actual results to differ materially from expected results described in forward-looking statements include, but are not limited to market conditions, and the possibility of cost overruns or unanticipated costs and expenses as well as those risk factors set out in the Company's current Annual Information Form, Management's Discussion and Analysis and other disclosure documents available under the Company's profile at www.SEDAR.com. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Such forward-looking statements have been provided for the purpose of assisting investors in understanding the Company's plans and objectives and may not be appropriate for other purposes. Accordingly, readers should not place undue reliance on forward-looking statements. Avalon does not undertake to update any forward-looking statements that are contained herein, except in accordance with applicable securities laws.