



130 Adelaide St. W., Suite 1901, Toronto, ON M5H 3P5  
Tel: (416) 364-4938 Fax: (416) 364-5162  
office@avalonraremetals.com  
www.avalonraremetals.com

## NEWS RELEASE

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### **Avalon Announces Hydrometallurgical Process Successfully Developed for its Nechalacho REE Deposit, Thor Lake, NWT**

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Toronto, ON – **Avalon Rare Metals Inc.** (TSX:AVL, OTCQX:AVARF) (“Avalon” or the “Company”) is pleased to provide a progress report on metallurgical process development for the Nechalacho rare earth element (“REE”) deposit, Thor Lake, NWT.

Following the successful development of a flotation process for producing an REE mineral concentrate in 2009 (as described in the Company’s news release dated July 20, 2009), recent work has focused on a hydrometallurgical process to further upgrade the REE into a chemical concentrate, probably a mixed rare earth carbonate. Avalon has now successfully established a hydrometallurgical process methodology, proven numerous times in the laboratory, for extracting the REE out of the mineral concentrates, bringing them into solution so that they can be upgraded by solvent extraction and precipitated as a chemical (carbonate) concentrate.

The Basal Zone layer of the Nechalacho deposit contains a high proportion of heavy rare earth elements (“HREE”, samarium to lutetium including yttrium) hosted in the minerals fergusonite and zircon along with light rare earth elements (“LREE”, lanthanum to neodymium) hosted in variable amounts of bastnaesite, synchisite, monazite and allanite. Approximately half of the HREE are hosted in fergusonite and half are hosted in zircon. These minerals also contain significant amounts of the rare metals tantalum (Ta), niobium (Nb) and zirconium (Zr) which will also be recovered and converted into saleable products.

Avalon’s metallurgical testwork, directed by expert consultant John R. Goode, P.Eng., has led to development of a flotation process at SGS Minerals Services (“SGS”) that successfully concentrates the zircon and fergusonite as well as the LREE mineral phases and associated columbite (a niobium tantalum oxide ore mineral). The flotation process flowsheet has been successfully reproduced by Xstrata Process Services (XPS) in Sudbury, Ontario and Avalon now considers this REE mineral concentration methodology to be firmly established. To date, the flotation mineral separation process results in a concentrate with an average REE, Nb, Ta and Zr recovery of about 80% at a mass pull of 18%. Optimization work will continue in order to refine the method and produce additional concentrates for hydrometallurgical testing. Pilot plant work on a five tonne bulk sample of the ore is planned for this summer.

After mineral concentrate production, the next step is mineral cracking, which involves breaking down the rare metal bearing minerals. Avalon has tested a number of methods and has settled on a two-stage process of sulphuric acid bake followed by caustic crack of the residue as the most technically and cost-effective methodology for this particular suite of REE-bearing minerals. This method results in approximately 90-95% of the rare metals being brought into solution. Avalon has completed numerous experiments at SGS that confirm that the route defined operates effectively and provides the basis for preliminary estimation of capital and operating costs. Further optimization of the process will continue over the balance of the year.

The process for upgrading the REE, Nb, Ta and Zr from solution will be conventional solvent extraction, similar to any other REE/rare metal hydrometallurgical plant. The model being prepared for the prefeasibility study presently contemplates production of a mixed REE carbonate containing all of the recovered LREE and HREE, however, Avalon will be continuing to investigate the merits of further separation to isolate the LREE, SEG (samarium, europium & gadolinium) and HREE separately as potential value-added products. The REE would all be produced as carbonates, the Zr as basic sulphate (ZBS), and the Nb and Ta as pentoxide, though other chemical forms are possible. Avalon is currently conducting its solvent extraction work at SGS.

The hydrometallurgical plant design work and estimation of capital and operating costs to be used in the prefeasibility study ("PFS") are being prepared by Melis Engineering Ltd., Saskatoon, Saskatchewan. This is the main information needed to finalize the economic model in the PFS. Avalon is working closely with Scott Wilson Roscoe Postle Associates ("Scott Wilson RPA"), its lead technical consultant, to finalize plant design cost estimates so that the PFS can be completed on schedule this spring.

The Company's Vice President, Operations, David Swisher and Vice-President, Exploration, William Mercer, Ph.D., P.Geo. are providing overall direction on the project. The qualified persons for the purposes of this news release are William Mercer and J.R Goode, P. Eng. Consulting Metallurgist.

#### **About Avalon Rare Metals Inc. ([TSX:AVL](#), [OTCQX:AVARF](#))**

[Avalon Rare Metals Inc.](#) is a mineral exploration and development company focused on rare metals deposits in Canada. Its flagship project, the 100%-owned Nechalacho Deposit, Thor Lake, NWT, is emerging as one of the largest undeveloped rare earth elements resources in the world. Its exceptional enrichment in the more valuable 'heavy' rare earth elements, which are key to enabling advances in green energy technology and other growing high-tech applications, is one of the few potential sources of these critical elements outside of China, currently the source of 95% of world supply. Avalon is well funded, has no debt and its work programs are progressing steadily. Social responsibility and environmental stewardship are corporate cornerstones. Avalon's performance on community engagement in the north earned it the 2010 PDAC Environmental and Social Responsibility Award.

Shares Outstanding: 78,801,698. Cash resources: approximately \$15 million.

To find out more about Avalon Rare Metals Inc., please visit our website at [www.avalonraremetals.com](http://www.avalonraremetals.com). For questions and feedback, please e-mail the Company at [ir@avalonraremetals.com](mailto:ir@avalonraremetals.com) or phone Don Bubar, President & CEO at 416-364-4938. For general discussion and commentary on the rare metals, please visit [www.raremetalblog.com](http://www.raremetalblog.com).

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