

## **Avalon continues to advance metallurgical work on the Separation Rapids Lithium Project, Kenora, Ontario**

May 25, 2016

Toronto, Ontario--(Newsfile Corp. - May 25, 2016) - [Avalon Advance Materials Inc. \(TSX: AVL\) \(OTCQX: AVLNF\)](#) ("Avalon" or the "Company") is pleased to provide an update on the 2016 work program on its 100% owned Separation Rapids Lithium Project, near Kenora, Ontario. Since the last update (provided in the [News Release dated April 5, 2016](#)), the Company has initiated its lithium hydrometallurgical process development work at the facilities of Thibault and Associates Inc., Fredericton, New Brunswick ("Thibault"), utilizing the bulk concentrate sample produced in the winter. Thibault are experts in applied process chemical engineering, with considerable experience in rare metals including lithium. The work is scheduled for completion in late June, following which the Preliminary Economic Assessment ("PEA") will be finalized.

### **Lithium Hydrometallurgical Process Development**

The focus of the hydrometallurgical process development work is to produce a lithium hydroxide product from a petalite (lithium mineral) concentrate suitable for use in lithium ion batteries. Preliminary work demonstrated that this product could be achieved employing a flowsheet using sulphuric acid as the primary solvent.

Recent work has successfully produced a very high purity lithium sulphate solution from the petalite concentrate. This is currently being converted to lithium hydroxide solution via an established electrolysis process using another service provider. Preliminary observations indicate a lithium hydroxide conversion efficiency matching, and possibly exceeding, original expectations.

Avalon personnel recently visited with a number of key equipment suppliers and technology experts in Europe in order to review alternative processes and technologies in key aspects of the proposed flowsheet. One such area is the use of fluidized bed roasting in place of conventional processing via rotary kilns. This technology offers significant reductions in energy requirements as well as better operating control. Other potential opportunities for optimization were also identified with regard to up-front ore sorting, modularized flotation plant design and acid roasting equipment.

Avalon has been active in finalizing the logistics for piloting the complete process flowsheet from optical ore sorting through to battery grade lithium hydroxide production. To this end, Avalon is in discussion with vendors and technology centres both in Europe and North America and plans to proceed with these programs later in 2016.

### **Feldspar and Silica By-Products**

Avalon is awaiting the results of testwork being conducted in Europe to evaluate the suitability of the feldspar by-product as a paint filler product. Discussions with vendors of suitable mills for the fine grinding requirements both in Europe and North America are already in progress. Results of testwork evaluating the potential production of a high purity silica by-product are also awaited and should be available by the end of May. Successful inclusion of one or both by-products into the final project will potentially improve overall project economics and reduce the environmental footprint.

Avalon is also awaiting further feedback from potential glass industry customers interested in the petalite concentrate as an industrial mineral product for glass-ceramics.

### **Other Project Activities and Future Plans**

Engineering work continues for the PEA, which is currently scheduled for completion this summer. The Company is advancing capital and operating cost estimates and evaluating various production scenarios. Samples of products from the flotation plant process have been sent for environmental testing as part of the project permitting process.

Avalon continues to investigate the possibility of developing a clean, low cost "run-of-river" hydro-power supply to the mine site with potential development partners. At least three sites have been identified along the English River near the deposit that offer this potential. Clean, low-cost hydro-power generation could provide environmental benefits and economic benefits both to the project and to local business partners interested in this opportunity.

A diamond drilling program is tentatively planned for August/September with the objective of demonstrating potential for significant additions to the historical mineral resources originally delineated in 1997-2001. The known resource remains open for expansion to depth and along strike.

Lithium market development work continues, with the Company attending the 8<sup>th</sup> Lithium Supply & Marketing Conference this week in Las Vegas. Avalon will also be presenting a paper entitled "Electric Vehicle Growth Dependent on Lithium Supply" at the Electric Vehicle Symposium and Exhibition (<http://www.evs29.org/>) in Montreal, Quebec June 19-22.

Following the completion of the PEA this summer, Avalon intends to proceed into a full Feasibility Study and environmental assessment work with a target date for completion in Q2 2017.

The technical information included in this news release has been reviewed and approved by the Company's Senior Vice President, Metallurgy and Technology Development, Mr. David Marsh, FAusIMM (CP), who is a Qualified Person under NI 43-101.

### **About Avalon Advanced Materials Inc.**

Avalon Advanced Materials Inc. (formerly Avalon Rare Metals Inc.) is a Canadian mineral development company specializing in niche market metals and minerals with growing demand in new technology. The Company has three advanced stage projects, all 100%-owned, providing investors with exposure to lithium, tin and indium, as well as rare earth elements, tantalum, niobium, and zirconium. Avalon is currently focusing on its Separation Rapids Lithium 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 [ir@AvalonAM.com](mailto:ir@AvalonAM.com), 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*

*[development] work is scheduled for completion in late June, following which the PEA will be finalized, that preliminary work demonstrated that this could be achieved employing a relatively simple flowsheet, that preliminary observations indicate a lithium hydroxide conversion efficiency matching, and possibly exceeding, original expectations, that use of fluidized bed roasting in place of conventional processing via rotary kilns may be an alternate, that this technology offers significant reductions in energy requirements as well as better operating control, that other potential opportunities for optimization were also identified with regard to up-front ore sorting, modularized flotation plant design and acid roasting equipment, that process flowsheet programs are planned to proceed later in 2016, that results of testwork evaluating the potential production of a high purity silica by-product are also awaited and should be available by the end of May, that successful inclusion of one or both by-products into the final project will potentially improve overall project economics and reduce the environmental footprint, that the PEA is currently scheduled for completion this summer, that clean, low-cost hydro-power generation would provide environmental benefits and economic benefits both to the project and to local business partners interested in this opportunity and that following the completion of the PEA this summer, Avalon intends to proceed into a full feasibility study along with environmental assessment work with a target date for completion in Q2 2017. . 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. Forward-looking 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](http://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.*