

# Avalon Provides Update on Metallurgical Process Optimization Work for Separation Rapids Lithium Project, Kenora, ON

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Toronto, Ontario--(Newsfile Corp. - October 7, 2020) - **Avalon Advanced Materials Inc.**

(<https://www.newsfilecorp.com/redirect/7wORUpLz?r=aHR0cHM6Ly93d3cuYm1jbXMxLmNvbS8=>) (TSX: AVL) and (OTCQB: AVLNF) ("Avalon" or the "Company") is pleased to provide an update on its Separation Rapids Lithium Project ("Separation Rapids" or the "Project"), situated approximately 70 km by road north of Kenora, Ontario. Since Avalon's news release dated June 3, 2020 (<https://www.newsfilecorp.com/redirect/eNa8cWnE?r=aHR0cHM6Ly93d3cuYm1jbXMxLmNvbS8=>), metallurgical testwork has been progressing on several fronts with the overall objectives of reducing costs, improving recoveries and optimizing lithium product quality. The Company is continuing to look at market opportunities to serve both the glass-ceramics market with its lithium mineral (petalite) product and the lithium battery materials market with its high purity lithium hydroxide product.

In its 2016 Preliminary Economic Assessment (<https://www.newsfilecorp.com/redirect/gDa1spAe?r=aHR0cHM6Ly93d3cuYm1jbXMxLmNvbS8=>), Avalon developed a proprietary process flowsheet to produce a high purity lithium hydroxide product from petalite for the lithium battery material market. The flowsheet has the advantage of generating limited waste by the recycling of the sulphuric acid solvent. To further optimize this flowsheet, Avalon has shipped a 50 kg sample of petalite concentrate to XPS (Expert Process Solutions) in Sudbury, Ontario to generate leach solution for use in optimizing the final stages of the process, which involves the use of electrolysis to produce lithium hydroxide. The program will focus on an improved membrane alternative and efficient crystallization of the final high purity product. The results will enable finalizing equipment selection and design.

With Ontario Premier Doug Ford recently announcing (<https://www.newsfilecorp.com/redirect/pQjvSonV?r=aHR0cHM6Ly93d3cuYm1jbXMxLmNvbS8=>) Ontario's interest in establishing new battery materials supply chains in the province, Avalon is investigating collaborative opportunities to establish a lithium processing facility in Northwestern Ontario. The facility being planned would produce lithium hydroxide, and would also accept concentrates from other producers of lithium minerals from the many pegmatite deposits that occur in northern Ontario.

In the glass-ceramics market, the innovation of new products is creating many new market opportunities for Avalon's petalite product. One such market requires a petalite product that has not been concentrated by froth flotation, as residual reagents on the surface of the product can compromise its performance in this specific glass-ceramic material. Recent testwork conducted at Met-Solve Laboratories, Langley, BC has successfully demonstrated that an acceptable quality petalite product to serve this market can be produced simply by using dense media separation. The Company's next step is to generate a larger product sample for evaluation by the customer that expressed interest in it.

Other testwork underway is focused on ways to reduce processing costs and energy consumption, including alternative milling technologies. Samples from three mineralogical sub-zones within the main Separation Rapids resource have been sent to Selfrag AG in Switzerland, for testing using their patented electric pulse disaggregation ("EPD") process. EPD uses high voltage electrical pulses to fragment broken rock along internal mineral grain boundaries. The result is a crushed mass of single mineral particles, as opposed to the less selective breakage that occurs with traditional mechanical comminution methods. Avalon believes EPD is the most relevant alternative milling method for reducing over-grinding and improving overall petalite recoveries as well as reducing energy consumption.

In June, Avalon received the necessary approvals to proceed with the 2,500 tonne bulk sample extraction program originally planned for 2019. The COVID-19 lockdown delayed implementation of the program but Avalon does have sufficient inventory of sample material for its present needs. The Company now intends to proceed with the additional bulk sampling work later this year after freeze-up. Planned upgrades to the access road will be undertaken in 2021.

The technical information included in this news release has been reviewed and approved by the Company's consulting metallurgist, Dave Marsh, FAusIMM (CP), Qualified Person under NI 43-101.

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

Avalon Advanced Materials Inc. is a Canadian mineral development company specializing in sustainably-produced materials for clean technology. The Company now has four advanced stage projects, providing investors with exposure to lithium, tin and indium, as well as rare earth elements, tantalum, cesium and zirconium. Avalon is currently focusing on developing its Separation Rapids Lithium Project near Kenora, Ontario while looking at several new project opportunities, including re-activating its 100%-owned Lilypad Tantalum-Cesium Project in northwestern Ontario. 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) (<mailto:ir@AvalonAM.com>).

*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 related to the Company's project development plans, what processing testwork will enable finalizing equipment selection and design, that the facility being planned would produce lithium hydroxide, and would also accept concentrates from other producers of lithium minerals, that the Company's next step is to generate a larger product sample for evaluation by the customer that expressed interest in it, that Avalon believes EPD is the most relevant alternative milling method for reducing over-grinding and improving overall petalite recoveries as well as reducing energy consumption, that Avalon does have sufficient inventory of sample material for its present needs, that the Company now intends to proceed with the additional bulk sampling work later this year after freeze-up and that planned upgrades to the access road will be undertaken in 2021. 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) (<https://www.newsfilecorp.com/redirect/YgapTo4o?r=aHR0cHM6Ly93d3cuYm1jbXMxLmNvbS8=>). 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.*



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