

Avalon to Pursue Staged Development Approach for the Separation Rapids Lithium Project, Kenora, ON

April 25, 2017

Toronto, Ontario--(Newsfile Corp. - April 25, 2017) - [Avalon Advanced Materials Inc.](#) (TSX: AVL) (OTCQX: AVLNF) ("Avalon" or the "Company") is pleased to announce that it will be pursuing a staged development approach for the Separation Rapids Lithium Project involving initial construction of a demonstration scale process plant in the Kenora area. This approach will satisfy the need to produce large volume trial samples of the Company's various lithium products for its customers. The facility would incorporate capacity both for lithium mineral concentration and for piloting Avalon's proprietary hydrometallurgical process to produce lithium battery materials including both lithium hydroxide and carbonate from petalite concentrates.

The Company's Preliminary Economic Assessment ("PEA"), disclosed in the news release dated [September 27, 2016](#), outlined a scenario for economic production of a high purity lithium hydroxide product from its concentrate of the lithium mineral petalite using an innovative new hydrometallurgical technique. The Company developed a proprietary flotation process in 1998-99 for concentrating the petalite which was further optimized during the 2016 pilot plant program and incorporated into the PEA model. This petalite concentrate can also be used as a direct input into high strength and thermal shock resistant specialty glass and ceramics products. Surging demand for lithium from battery makers is disrupting traditional supply sources for innovators in the glass industry, which still accounts for 30% of global lithium demand as [reported by the USGS](#). This creates an opportunity for new producers of high purity lithium minerals to fill the growing supply gap. Avalon's high purity petalite concentrate is ideally suited to meet this need.

In addition, under the non-binding Letter of Intent entered into with Lepidico Ltd., disclosed in the Company's news release dated [February 6, 2017](#), the Company has a potential buyer for a lepidolite mineral concentrate which will also be produced from the Company's demonstration plant. Lepidico [has disclosed](#) its desire to gain ready access to this high grade lithium product by co-locating its planned lithium carbonate demonstration plant facility with Avalon's demonstration plant in the Kenora area.

Recent work by Avalon has determined that a phase 1 demonstration plant designed to process 11 tonnes of ore per hour (90,000 tpa) could satisfy the initial requirements of Lepidico and potential glass customers, as well as provide sufficient feed for the lithium hydroxide hydrometallurgical process circuit in the same facility. It will also provide facilities for confirming other by-product opportunities including feldspar. Lastly it will demonstrate the efficiency of Avalon's innovative processes and confirm the ability to scale up and expand this technology in an operational environment. Preliminary estimates of the capital requirements for the demonstration plant are in the order of US\$25 million, which the Company expects to finance with the support of the customers for its lithium products.

The Company now plans to proceed with an update of its 2016 PEA Technical Report to reflect the potential for petalite and lepidolite lithium concentrate production in addition to value-added lithium battery materials, using the staged development approach. This update will provide a more detailed cost estimate for the phase 1 demonstration plant and an update on the lithium battery

materials price assumptions to reflect reports of recent price appreciation for both lithium carbonate and lithium hydroxide. The independent Qualified Persons from Micon International Limited that supervised the preparation of the Company's 2016 PEA have agreed to provide the technical support for this updated study.

A suitable industrial property with all required infrastructure including grid power, natural gas and rail access has already been identified in the Kenora area. With the availability of an industrial site, the Company anticipates that an efficient permitting process can be applied which could see the demonstration plant commence operations in less than two years.

Avalon's Senior Vice President for Metallurgy and Technology Development, Dave Marsh commented, "This staged approach has the potential to reduce overall investment risk for the Separation Rapids Project by establishing a small-scale demonstration plant to confirm the commercial viability of our innovative lithium processing technology before proceeding to a full-scale operation. This facility will also have the capacity to generate large volume trial samples of our lithium products for our customers, particularly consumers of petalite in the glass industry."

Avalon's President, Don Bubar, added, "Getting a lithium battery materials demonstration plant up and running in the Kenora area will establish northwestern Ontario as a new regional centre for the production of the critical materials needed for Canada's growing cleantech supply chains."

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), and Donald S. Bubar, P.Geo. both Qualified Persons under NI 43-101.

About Avalon Advanced Materials Inc.

Avalon Advanced Materials 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, 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, the statement that Avalon will be pursuing a staged development approach for the Separation Rapids Lithium Project, that this approach will satisfy the need to produce large volume trial samples, that the facility would incorporate capacity both for lithium mineral concentration and for piloting Avalon's proprietary hydrometallurgical process to produce lithium battery materials including both lithium hydroxide and carbonate from petalite concentrates, that the Company's petalite concentrate can also be used as a direct input into high strength and thermal shock resistant specialty glass and ceramics products, that surging demand for lithium from battery

makers is disrupting traditional supply sources for innovators in the glass industry, and this creates an opportunity for new producers of high purity lithium minerals to fill the growing supply gap, that Avalon's high purity petalite concentrate is ideally suited to meet this need, that the Company has a potential buyer for a lepidolite mineral concentrate which will also be produced from the Company's demonstration plant, that Lepidico is co-locating its planned lithium carbonate demonstration plant facility with Avalon's demonstration plant in the Kenora area, that the plant could satisfy the initial requirements of Lepidico and potential glass customers, as well as provide sufficient feed for the lithium hydroxide hydrometallurgical process circuit in the same facility, that the plant will also provide facilities for confirming other by-product opportunities including feldspar, that it will demonstrate the efficiency of Avalon's innovative processes and confirm the ability to scale up and expand this technology in an operational environment, that preliminary estimates of the capital requirements for the demonstration plant are in the order of US\$25 million, and that the Company expects to finance this with the support of the customers for its lithium products, that the Company now plans to proceed with an update of its 2016 PEA Technical Report, that this update will provide a more detailed cost estimate for the phase 1 demonstration plant and an update on the lithium battery materials price assumptions to reflect reports of recent price appreciation for both lithium carbonate and lithium hydroxide, that with the availability of an industrial site, the Company anticipates that an efficient permitting process can be applied which could see the demonstration plant commence operations in less than two years, that a staged approach has the potential to reduce overall investment risk for the Separation Rapids Project and that lithium battery materials demonstration plant in the Kenora area will establish northwestern Ontario as a new regional centre for the production of the critical materials needed for Canada's growing cleantech supply chains. 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. 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.