



Avalon Advanced Materials Inc. is a leader in developing new North American sources of critical minerals for clean technology, such as rare earths and lithium. Avalon is among a small group of emerging companies that are identifying their own strategic resources and process solutions to produce critical minerals for new technology sustainably and enable full supply chains to be established in North America. This includes extracting critical minerals from historic mine wastes while remediating long term environmental liabilities.

Avalon's extensive experience with critical minerals and long-standing commitment to sustainability and social responsibility puts the company in a unique position to utilize its strategic resource inventory to help create a more efficient, sustainable supply chain for critical minerals and create new economic development opportunities for Indigenous communities in northern Canada.

- Market Cap: C\$15 million
- Shares outstanding: 341 million
- Fully diluted: 374 million
- Over 20,000 shareholders worldwide: Insiders (15%), Institutional (15%), Retail (70%)
- Working Capital: \$1 million

Materials for Clean Technology

There is ever-growing demand for formerly-obscure elements such as rare earths, lithium, tantalum, niobium, cesium, scandium, indium, gallium, germanium, zirconium and beryllium. All are critical minerals needed for: clean energy, aerospace, defense, energy efficiency, modern electronics, medicine and much more. However, technology materials are often minor by-products of other mining operations, are not traded on commodity exchanges and do not have well-established supply chains.

With its rich and diverse mineral resource endowment, Canada can take the lead in implementing environmentally and socially responsible clean technology materials development. We are already seeing supply shortages for rare earths and lithium as increased demand growth outpaces the development of new, secure supply chains for non-traditional mineral commodities vital for new technology.



TSX: AVL & OTCQB: AVLNF



Mineral exploration & development co.



Clean technology materials focus



Toronto-based est. 1995



Staged- development project approach to minimize risk



Leader in Indigenous community engagement



Recognized by Corporate Knights 2018, 2016 & 2015

Operations designed to:



- Minimize GHG Emissions**
- Reduce environmental footprint**
- Extract value from historical mine wastes**
- Plan for productive use of land post closure**

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Advanced Project Portfolio

Clean Technology Business Opportunities

Avalon is evaluating the opportunity to apply an innovative new extraction technology to recover rare earths and other metals from acid mine drainage at closed mine sites (such as the Will Scarlett closed coal mine in southern Illinois).

Avalon plans to participate in the installation and operation of a demonstration facility to scale up the process, if funding can be arranged.

The goal is to remediate environmental liabilities on such sites, while recovering separated rare earths at a much lower cost than traditional solvent extraction technology

Separation Rapids Lithium

Lithium-cesium-tantalum (LCT) pegmatite deposit unusual in its enrichment in the lithium minerals petalite and lepidolite.

Potential producer of lithium minerals for high tech glass applications and lithium battery materials (2018 updated PEA).

Current activities and future plans include: bulk sample processing to produce more lithium mineral product samples and finalize process flowsheet and plant design parameters, securing off-take agreements and arranging project financing.

The global glass industry is valued at over \$100 billion and continues to grow through innovation of new products, many of which take advantage of the unique properties of lithium for strengthening glass.

East Kemptville Tin

Past-producing tin mine in southwestern Nova Scotia that closed prematurely in 1992 due to low tin prices.

Site hosts large stockpiles of low-grade tin mineralization that can be economically processed using new ore-sorting technology to recover tin concentrates.

Business model to economically rehabilitate brownfield site with a perpetual environmental liability caused by acid mine drainage.

Avalon finalized a PEA in 2018 and is presently completing negotiations toward securing full tenure to the site under a mining lease.



Nechalacho Rare Earths

Rich polymetallic rare metals resource, with potential for economic recovery of the rare earth elements, as well as zirconium, niobium and tantalum.

Explored from 2006-14 primarily for its potential to produce heavy rare earths from the Basal Zone, with a Feasibility Study released in 2013.

In 2019, Avalon and Cheetah Resources Pty Ltd. entered into a definitive agreement in which Cheetah will acquire T-Zone and Tardiff Zone resources for C\$5 million. Avalon retains its 100% interest in the Basal Zone.

Lilypad Cesium-Tantalum-Lithium

Sampling program carried out in 1999 confirmed the presence of economically-significant cesium-tantalum- lithium- mineralization.

Avalon is planning to re-activate the project in 2020, with a work program including bulk sampling to commence metallurgical process development work, as well as geological and geochemical surveys to define additional resources.

With declining production from traditional sources of cesium, new producers are needed for this very rare metal to meet growing demand in many new high technology applications, such as atomic clocks.

PEAs are preliminary in nature, include Inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that a PEA will be realized.

The technical information contained in this document has been reviewed and approved by Donald Bubar, P.Geo. (ON), President and CEO of Avalon, the qualified person for the purposes of National Instrument 43-101. This document contains or incorporates by reference "forward looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities legislation, which may not be based on historical fact. Readers can identify many of these statements by looking for words such as "believe", "expects", "will", "intends", "projects", "anticipates", "estimates", "continues" or similar words or the negative thereof. Statements that are not based on historical fact contained in this presentation, including through documents incorporated by reference herein, are forward-looking statements that involve risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in the forward-looking statements. Such forward-looking statements reflect the Company's current views with respect to future events and include, among other things, statements regarding targets, estimates and/or assumptions in respect of reserves and/or resources, and are based on estimates and/or assumptions related to future economic, market and other conditions that, while considered reasonable by the Corporation, are inherently subject to risks and uncertainties, including significant business, economic, competitive, political and social uncertainties and contingencies. These estimates and/or assumptions include, but are not limited to: grade of ore; rare earth and by-product commodity prices; metallurgical recoveries; operating costs; achievement of current timetables for development; strength of the global economy; availability of additional capital; and availability of supplies, equipment and labour. Factors that could cause the Company's actual results, performance, achievements, developments or events to differ materially from those expressed or implied by forward-looking statements include, among others, but are not limited to, market conditions, the possibility

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