

Separation Rapids Lithium Project

As at June 13, 2016

一個獨特，巨大，罕有的透鋰長石礦

TSX: AVL & OTCQX: AVLNF

項目位置

屬於Avalon全權擁有的Separation Rapids位於安大略Kenora市的北面大約70公里處。加拿大太平洋鐵路公司的主線和加拿大國家鐵路公司的火車都經過項目的南部。礦產資源的使用權基於一份與安大略省政府簽署的採礦租約，採礦租約包括的範圍大約為421頃。Separation Rapids位於Wabaseemoong土著社區的傳統土地之中，Avalon已經和該土著社區續簽了一份共同合作開發這個項目的諒解備忘錄。

項目概況

Separation Rapids礦產項目擁有**全世界最大的“複合型”稀有金屬偉晶岩礦藏**之一。這個礦藏不同尋常之處是它擁有豐富的罕見的高純度的鋰礦透鋰長石。現今世界上只有一個較大型的透鋰長石生產商，而這生產商位於津巴布韋。Separation Rapids有潛力可以成為一個透鋰長石的生產商，從而可同時供應鋰離子電池市場以及玻璃和陶瓷工業。

概要

潛在產物：

高純度鋰化合物可用於電池；透鋰濃縮物可用於玻璃-陶瓷；副產物品包括鈹，二氧化硅和長石。

發展階段：

較後期的項目發展正處於試驗工廠階段，現在為全規模示範廠和可行性研究作準備。

資本投資：

至今大約 760 萬

項目概念：

礦石將初步進行露天開採，隨著產量的增加可能在生產的後期轉為地下開採。碎礦石將在當地進行處理，以生產出高純度透鋰長石濃縮品。透鋰長石濃縮品可直接出售給玻璃和陶瓷業，或者運往到另一個工廠繼續加工成主要用於生產鋰離子電池的超高純度的鋰化合物。

下一步驟：

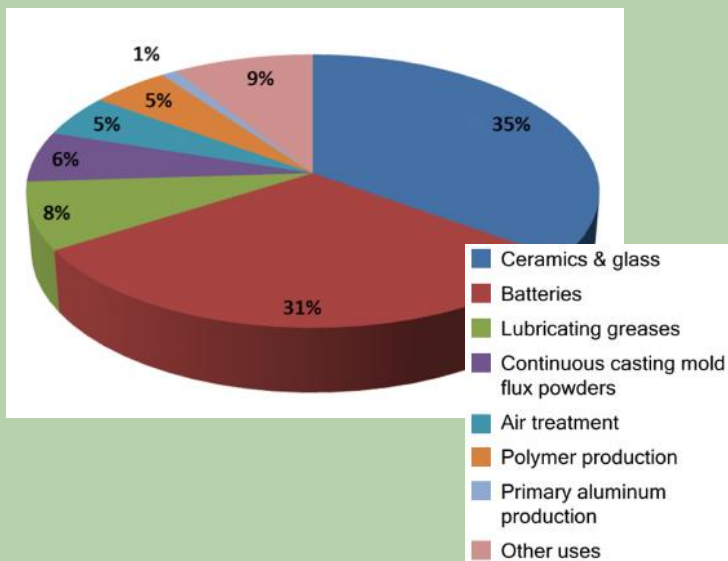
- 建造全規模示範工廠從而生產透鋰長石產品作為提供玻璃陶瓷生產商作生產試驗
- 進行進一步冶金提取鋰化合物的發展工程，從而希望可在 2016 年完成初步經濟評估，並在 2017 年完成經濟可行性研究報告
- 進行鑽探項目從而探明和界定更多的鋰資源
- 調查供應另類經濟綠化的電力給項目礦場及冶煉廠的可能性
- 改善到項目廠址的通路

鋰礦物市場簡介

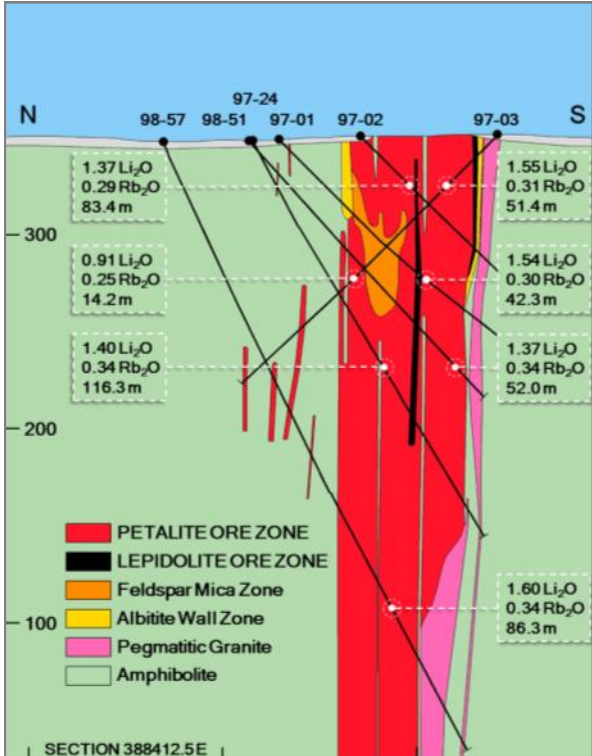
透鋰長石是一種罕見的鋰礦，它是Separation Rapids礦藏中主要的經濟礦物。跟其他鋰礦物比較(如鋰輝石)，透鋰長石是用來製造玻璃陶瓷產品的首選，這是因為其一貫性的低雜質含量(尤其是鐵質)。這也引起了對應用透鋰長石作為生產超高純度鋰化合物的原料的興趣。超高純度的鋰化合物正是現今應用鋰離子電池技術製造可再充電電池的生產商所需要的原料。本公司已證明了可隨時從透鋰長石濃縮品中提煉出可適用於製造電池的碳酸鋰。而透鋰長石濃縮品也可提煉出高純度的氫氧化鋰。

透鋰長石是一些生產商用來製造零熱膨脹玻璃，粘土炊具和陶瓷用料的首選。最為熟悉的消費應用是Corningware®炊具和Ceran®玻璃-陶瓷爐灶台。儘管現今對於生產電池的鋰化合物的需求正急速地增長（並預期全球需求量在未來5至10年內將會加倍），但應用於生產陶瓷和玻璃的鋰化合物仍然是鋰礦物的最大市場，估計佔全球鋰消耗量的35%。

全球鋰的終端市場



垂直斷面



Maximum depth tested: Approximately 260 m

可持續發展報告

BALANCING OPPORTUNITIES

本公司的可持續性發展的原則是指採用業界的領先標準去管理健康, 安全和環境, 並與當地社區進行資訊和溝通。在2015年12月, 本公司發布按照GRI G4 和 MAC TSM為標準的第四年度可持續發展報告。完整報告可在本公司網站下載。

如需要更詳細信息, 請瀏覽

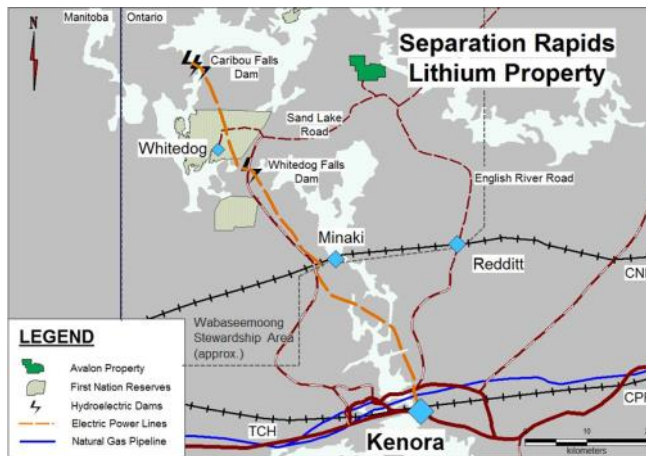
www.AvalonAdvancedMaterials.com

或電郵: ir@AvalonAM.com

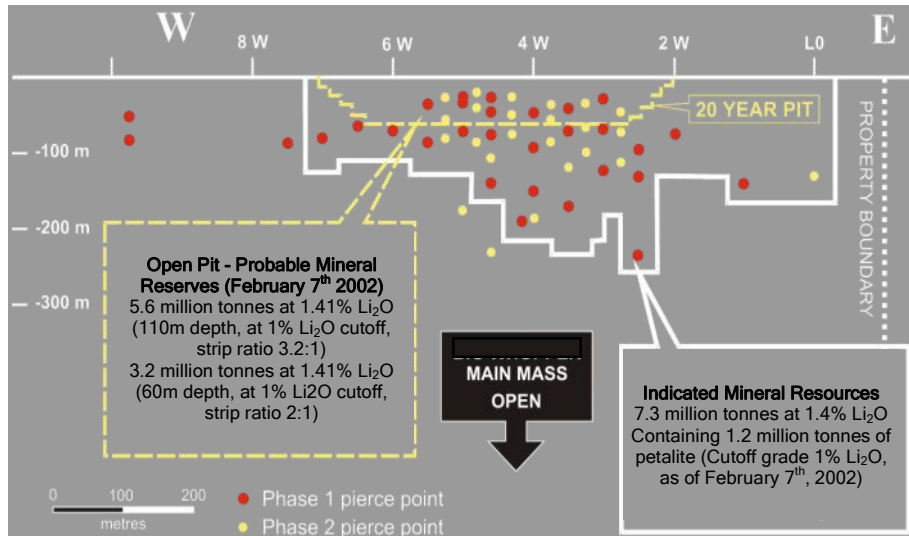
策略優勢

- 鋰主要存在於罕有的鋰礦透鋰長石中, 由於鋰含有極低的鐵含量, 從而成為特種玻璃陶瓷品的需要原料(鐵質在玻璃中是著色劑)。
- 高純度使得Separation Rapids的礦物可適合於用來生產電池級的鋰化物
- 有潛力可生產多種副產物(如長石, 鉬)
- 礦產資源儲量大, 礦床深度的開放意味著潛在的較長期的礦山生產壽命
- 極小的礦場遺留環境足跡
- 無危險廢物
- 臨近完善的交通和社區基礎設施
- “一個產品供應兩個市場”的商業模式可減低市場風險

基礎設施地圖



縱斷面



These are historical resources and reserves estimates from 2001 that need updating to comply with current NI 43-101 requirements and should therefore not be relied upon. The Probable Mineral Reserves include only Indicated Mineral Resources. No Inferred Mineral Resources were utilized in the 2000 open pit design.



130 Adelaide Street West, Suite 1901 T: (416) 364-4938
 Toronto, ON Canada M5H 3P5

The technical information contained in this document has been reviewed and approved by Bill Mercer, Ph.D., P. Geo. (ON), P. Geo. (NWT), Vice President Exploration of Avalon, the qualified person for the purposes of National Instrument 43-101.

FORWARD LOOKING INFORMATION: 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; lithium minerals 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 of cost

overruns or unanticipated costs and expenses, the impact of proposed optimizations at the Company's projects, actual results of exploration activities, mineral reserves and mineral resources and metallurgical recoveries, discrepancies between actual and estimated production rate, mining operational and development risks and delays, regulatory restrictions (including environmental), activities by governmental authorities, financing delays, joint venture or strategic alliances risks, or other risks in the mining industry, as well as those risk factors discussed or referred to in the Company's annual Management's Discussion and Analysis and Annual Report filed with the securities regulatory authorities in all provinces and territories of Canada, other than Québec, and available at www.sedar.com. Most of the foregoing factors are beyond Avalon's ability to control or predict. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that the plans, intentions or expectations upon which these forward-looking statements are based will occur. The forward-looking statements contained herein are qualified in their entirety by this cautionary statement. Readers should not place undue reliance on the forward-looking statements, which reflect management's plans, estimates, projections and views only as of the date hereof. The forward looking statements contained herein is presented for the purpose of assisting readers in understanding the Corporation's expected financial and operating performance, and the Company's plans and objectives, and may not be appropriate for other purposes. Avalon does not undertake to update any forward-looking statements that are contained herein, except in accordance with applicable securities law.