Tesla's Lithium Refinery in Texas Ushers in a New Era for Critical Minerals Refining in the US

written by Matt Bohlsen | May 17, 2023
As announced on May 8, 2023, Tesla Inc. (NASDAQ: TSLA) has recently broken ground on their new lithium refinery in the greater Corpus Christi area of Texas, USA. The new, more than US\$1 billion Tesla refinery will produce battery-grade lithium hydroxide ("LiOH") with targeted commissioning by the end of 2023. Given Elon Musk's track record, it may be more likely to shift into 2024.

Avalon's Don Bubar on the first regional lithium battery materials refinery in Ontario

written by InvestorNews | May 17, 2023
In this InvestorIntel interview with host Tracy Weslosky, <u>Avalon Advanced Materials Inc.</u>'s (TSX: AVL | OTCQB: AVLNF) President, CEO and Director, Don Bubar talks about Avalon's recent <u>partnership agreement</u> with an Essar Group company to co-develop Ontario's first regional lithium battery materials refinery in Thunder Bay, Canada.

In the interview, which can also be viewed in full on the InvestorIntel YouTube channel (click here), Don Bubar says that the setting up of the refinery is the key step in establishing a domestic battery materials supply chain to serve the needs of future electric vehicle and battery manufacturers in North America. Touching upon the Ontario government's Critical Minerals Strategy to support a domestic electric vehicle supply chain, Don provides an update on the feasibility studies for both the refinery operations and lithium mineral concentrate production at Avalon's Separation Rapids, Ontario, Project. With the Canadian Federal government also signaling strong support to the domestic critical minerals industry in the 2022 Canadian Federal Budget, Don talks about the renewed interest for Avalon petalite lithium mineral concentrates from high strength, high temperature capable, glass and ceramic manufacturers.

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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 continuing to advance other projects, including its 100%-owned Lilypad Cesium-Tantalum-Lithium Project located near Fort Hope, Ontario. Social responsibility and environmental stewardship are corporate cornerstones.

To learn more about Avalon Advanced Materials Inc., click here

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Can Avalon Advanced Materials ride the lithium tidal wave?

written by InvestorNews | May 17, 2023

Lithium miners have been the best performing sector of almost every sector of the stock market over the past year. This has been due to a 'tidal wave' of new lithium demand as electric vehicle (EV) sales dramatically increased over the past year. For example global electric car market share more than doubled from 4.2% in calendar year 2020 to 8.7% in the month of June 2021. This has led to a surge in lithium demand and subsequently lithium prices in 2021.

Lithium prices (1 year chart) have risen rapidly due to a massive demand increase from booming EV sales

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Source: Trading Economics

One under the radar lithium junior is <u>Avalon Advanced Materials Inc.</u> (TSX: AVL | OTCQB: AVLNF) ("Avalon"). Avalon has six 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 their Separation Rapids Lithium Project near Kenora, Ontario, while looking at several new project opportunities, one being a lithium hydroxide (and other materials) refinery in Thunder Bay, Ontario, Canada. They are also working to advance their Lilypad Cesium-Tantalum Project, in Ontario, Canada.

Separation Rapids Lithium Project (100% owned; Ontario, Canada) + possible lithium battery materials refinery (Thunder Bay, Canada)

Avalon completed a <u>PEA</u> of their 100% owned Separation Rapids Lithium Project in 2018, resulting in a pre-tax NPV8% of <u>\$156</u> million, post tax IRR of 22.7%, CapEx C\$77.7 million with a 20 year mine life.

Then in March 2021, Avalon <u>announced</u> a Letter of Intent ("LOI") with Fort William First Nation ("FWFN") to collaborate on the development of a lithium battery materials refinery located on industrial lands owned by FWFN in Thunder Bay, Ontario. As stated in the announcement: "This facility would be designed to accept lithium mineral concentrates from Avalon's Separation Rapids Lithium Project (70 km north of Kenora) and Rock Tech's Georgia Lake Lithium Project (145 km northeast of Thunder Bay), as well as potentially other emerging, new lithium mining operations in northern Ontario, to produce lithium hydroxide and other lithium battery materials."

Then in May 2021, Avalon reported that their recent process testwork using dense media separation ("DMS") technology had proven to be successful at producing a high-quality petalite lithium mineral concentrate $(4.0\%-4.2\%\ \text{Li}_20)$ from their Separation Rapids Lithium Project. The concentrate is suitable for the needs of specialty glass-ceramic end-users. As a result, Avalon is now looking at acquiring their own DMS equipment so they can more quickly meet the needs of the many end-users that have expressed interest over the years in their petalite product samples. Avalon will also resume exploration work this summer on the western part of the Separation Rapids property to further work towards growing their resource.

Avalon Advanced Materials Separation Rapids Lithium Project -

PFS & PEA completed



Source: Company presentation

Announced in July 2021, Avalon is now in active discussion to potentially progress their lithium materials refinery in Thunder Bay. The release <u>stated</u>: "On the lithium battery materials market development work, Avalon continues to engage with potential customers looking for new supply sources and are in active conversation with one group in Europe. With a firm commitment on off-take, Avalon can then proceed with its plans for establishing a lithium refinery in Thunder Bay."

Lilypad Cesium-Tantalum Project (100% owned; Ontario, Canada)

Avalon's Lilypad Property, located 150 km northeast of Pickle Lake, Ontario, is an exploration stage project with cesium-tantalum-lithium mineralization. It has some potential to be a secondary lithium supply source for Avalon, however, cesium and tantalum are the key products for now.

In July 2021 news, Avalon <u>stated</u>: "Following the closing of the recent flow-through financing, an exploration work program was initiated in June on its 100% owned Lilypad Cesium-Tantalum Project involving re-establishing a field camp and new grid on the property in preparation for detailed mapping and geochemical sampling to commence later this month. Additional cesium mineralized rock was collected from the Pollucite Dyke for continued process research on techniques to efficiently concentrate the rare cesium mineral pollucite, which continues to be in high demand. Drilling is planned for later this year."

Avalon Advanced Materials project pipeline

Source: Company presentation

Closing remarks

As evidenced by a recent record lithium spodumene spot market price achieved this past week of US\$1,250/t (around 3x the contract prices from 12 months ago), there is now a new realization that lithium supply is critically low. This means it is a great time to be a lithium miner and it generally acts to boost the sentiment of the sector thereby helping lithium juniors raise capital and hopefully reach production.

Avalon Advanced Materials is not only a junior lithium miner, as they have a total of 6 projects across multiple critical metals and rare earths. Key critical metals Avalon has are lithium, tantalum, cesium and zirconium; all are on the list of U.S critical materials. The Company trades on a market cap of only C\$52 million. One to watch.