# Don Bubar of Avalon Advanced Materials on delivering lithium for batteries and advanced ceramics

written by InvestorNews | October 11, 2022

In this Critical Minerals Institute interview, host Jack Lifton talks to Avalon Advanced Materials Inc.'s (TSX: AVL | OTCQB: AVLNF) President, CEO and Director Don Bubar about establishing a North American lithium supply chain and Avalon's new off-take agreement with a major international glass-ceramics manufacturer for petalite concentrates.

In the interview, which can also be viewed in full on the InvestorIntel YouTube channel (click here to access InvestorChannel.com), Don talks about the competitive advantages of building Avalon's lithium refinery in Thunder Bay, Ontario. In addition to having recently signed an MOU with LG Energy Solution to supply battery-grade lithium hydroxide starting in 2025, Don tells Jack: "The main reason for establishing it there was also to basically open the door to other producers of lithium mineral concentrates from the many, many lithium pegmatites that occur throughout Northwestern Ontario…" In addition to lithium, Don says that Avalon provides exposure to multiple other minerals like rare earths, tantalum, and cesium.

Don also talks about a recently announced multi-year agreement for Avalon to supply a non-Chinese international glass ceramic manufacturer with petalite concentrates. "High strength glass ceramic products of various types," Don tells Jack, "that's a market you don't hear a whole lot about for lithium. It is growing now too through further innovation in other types of

high strength glass products and ceramic products.”

To access the full Critical Minerals Institute interview, click here

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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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# Don Bubar of Avalon Advanced Materials on signing key new

# agreements and the high demand for lithium

written by InvestorNews | October 11, 2022
In this InvestorIntel interview, host Tracy Weslosky talks to Avalon Advanced Materials Inc.'s (TSX: AVL | OTCQB: AVLNF) President, CEO and Director Don Bubar about the growing world demand for lithium for high strength glass ceramics, and its recent announcement that it has secured a firm commitment to purchase petalite concentrates produced at the company's Separation Rapids Lithium Project in Ontario, Canada.

In the interview, which can also be viewed in full on the InvestorIntel YouTube channel (click here to access InvestorChannel.com), Don tells Tracy that most people are aware of the growing importance of lithium in EV battery technology, but "one of the main uses from the past has always been in high strength glass ceramic products… It's actually the mineral that Corning used to invent CorningWare cookware, which was one of the first examples of high strength glass ceramic product." He goes on to say that there is increasing demand and innovative uses for other types of high strength glass ceramic products that require the high purity lithium aluminum silicate mineral petalite produced by Avalon. Don also discusses the new multi-year off-take agreement recently announced by Avalon for the delivery of petalite to a major non-Chinese international glass ceramic manufacturer.

Don also talks about Avalon being one of the three companies to sign a non-binding memorandum of understanding with LG Energy Solution to supply them with a battery-grade lithium hydroxide starting in 2025. The MOU was signed during the visit of South Korea's President, Yoon Suk Yeol, to Canada in September. Under

the terms of the MOU, Avalon would commit for an initial period of five years to provide LGES with at least 50% of its planned initial lithium hydroxide production. Don adds: “We’ve been getting the message out on our vision for creating the lithium battery materials refinery in Thunder Bay, and that would be an ideal location to serve the needs of companies that are now going to set up manufacturing facilities in Southern Ontario.”

To access the full InvestorIntel interview, click here

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# A triple play deal for battery materials between Canada and Korea prove critical minerals incentives work

written by InvestorNews | October 11, 2022

When we started writing the Dean's List series back in late July to highlight the burgeoning government support for critical minerals, supply chain and EV battery manufacturing, I had no idea how quickly that support would start turning into tangible deals for producer supply agreements. Sure, the first big facility announcement was way back in March with the Stellantis, LG Energy Solution C$4.9 billion electric vehicle battery plant in Windsor, Ontario, and there have been numerous deals announced in the interim both North and South of the 49th parallel for various multi-billion dollar facilities. But what happened on September 22 and 23 appears to have taken things to another level for the producers of the materials that go into EV batteries.

The aforementioned South Korean LG Energy Solution Inc. (LGES), a leading global manufacturer of lithium-ion batteries for electric vehicles, mobility, IT, and energy storage systems, announced three agreements in a span of 24 hours with Canadian miners to source materials required to make batteries for EVs. It appears the Inflation Reduction Act, which requires that 40% of battery components be sourced from factories in the U.S. or its free trade agreement partners and that Chinese components and minerals be phased out beginning in 2024, has lit a fire under those who want to lead the charge to manufacture EV batteries for North American built vehicles. Given where demand

is forecast to go over the next 5 to 10 years, these three deals could just be the tip of the iceberg as other manufacturers follow suit.

The first “winner” of the LGES battery supply lottery was Electra Battery Materials Corporation (TSXV: ELBM | NASDAQ: ELBM). Electra is a processor of low-carbon, ethically-sourced battery materials who is currently commissioning North America’s only cobalt sulfate refinery. Their deal is a three-year agreement to supply LGES with 7,000 tonnes of battery grade cobalt from 2023 to 2025. Electra will supply 1,000 tonnes of cobalt contained in a cobalt sulfate product in 2023 and a further 3,000 tonnes in 2024 and 2025 under an agreed pricing mechanism. Cobalt sulfate provided under the term of the contract with LGES will be sufficient to supply up to 1.5 million full electric vehicles. In addition to the supply agreement, Electra and LGES have agreed to cooperate and explore ways to advance opportunities across North America’s EV supply chain, including, but not limited to, the securing of sustainable sources of raw materials.

Next up for LGES was a pair of lithium supply deals. We’ll explore the Avalon Advanced Materials Inc. (TSX: AVL |OTCQB: AVLNF) news first, mainly because it was the first company highlighted on the Dean’s List, so indulge me while I pat myself on the back. Avalon is a Canadian mineral development company specializing in sustainably produced materials for clean technology. 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. The Company signed a non-binding memorandum of understanding (MOU) with LGES to supply battery-grade lithium hydroxide starting in 2025. The MOU would see Avalon commit, for five years initially, to provide LGES with at least 50% of its

planned initial lithium hydroxide production from its Thunder Bay facility (11,000 tons per year), with the potential to increase production as demand grows.

The second lithium, and third overall deal for LGES in a 24 hours span was with Snow Lake Resources Ltd. (NASDAQ: LITM). Snow Lake is committed to creating and operating a fully renewable and sustainable lithium mine that can deliver a completely traceable and carbon neutral product to the North American electric vehicle and battery markets. The Thompson Brothers Lithium Project now covers a 55,318-acre site and contains an identified-to-date 11.1 million metric tonnes indicated and inferred resource at 1% Li2O. Snow Lake signed a non-binding MOU with LGES to supply lithium hydroxide (20,000 tons per year) over a 10-year period once production starts in 2025. The deal between the two entities will see them collaborate to explore the opportunity to create one of Canada's first lithium hydroxide processing plants in CentrePort, Winnipeg, Manitoba.

It should be noted that the Electra deal is a binding term sheet, while the other two are non-binding MOUs. Investors need to understand that there is a lot more certainty to the Electra deal than the other two which is likely why, as of yesterday's close, Electra was still up 2% versus where it was trading before the LGES announcement while Avalon was down 6% and Snow Lake down 18% versus pre-LGES announcement trading. Not to take anything away from the non-binding deals, they are still very important and a positive sign for these companies, but the market isn't very forgiving these days so there is definitely value in certainty. For Avalon that certainty is anticipated to come with a definitive supply agreement, which is intended to be finalized in no later than 6 weeks. I could not find confirmation of timing to firm up commitments in any of Snow Lake's press releases.

# Rare earths expert Alastair Neill on Vital Metals

written by | October 11, 2022

“Overall Vital appears well on the way to producing commercial quantities of rare earth concentrate, a first in Canada.” – Alastair Neill, President, Critical Minerals Institute

Vital Metals Limited (ASX: VML | OTCQB: VTMXF) is an Australian listed company whose subsidiary, Cheetah Resources, is developing the Nechalacho project in the Northwest Territories of Canada. The deposit was previously owned by Avalon Advanced Materials Inc. (TSX: AVL | OTCQB: AVLNF), and they sold the rights in 2019 to Cheetah for the material 150 meters above sea level. Avalon retained the rights to the basal zone deposit which is underground. The deposit is reported to have 94.7 million tonnes at 1.46% REO (0.1% Nd/Pr cutoff). The mineral hosting the rare earths is bastnaesite, which is good as this mineral has been processing successfully for many years.

Vital raised A$45 million recently through a targeted share placement at A$0.04 per share. According to their press release the funds will be used for:

- Finalisation of construction activities and undertake commissioning, ramp-up and operations at its Rare Earth Extraction Facility in Saskatoon, which will produce a rare earth carbonate product
- Accelerated development of Tardiff deposit at Nechalacho, Canada, including mining studies

**A strong balance sheet for ongoing working capital requirements**

This project is the most advanced rare earth project currently in Canada. The initial focus is the North T zone which has a resource of 101,000 metric tonnes at 9.01% contained Total Rare Earth Oxides (TREO). Based on tests run at their Saskatoon rare earth extraction plant they can get a 75% recovery to produce a 43.7% concentrate. Based on this, the deposit would produce 6,825 metric tonnes of TREO which would contain 1,600 tonnes of Neodymium (Nd) and Praseodymium (Pr). Tests have been done using X-ray Transmission (XRT) to sort the ore as the ore is hosted in quartz, which is white, and the rare earth mineral which is red. This is a simple way to upgrade the TREO content at site.

There is an offtake agreement with REEtec, a Norwegian company that is developing a new rare earth separation process. The agreement is for Vital to deliver 1,000 tonnes per year (TPY) of TREO (excluding Cerium (Ce)). Based on that Ce will be eliminated before shipping the concentrate to Norway. This is a step that has been done before by Molycorp in the 1980s. It reduces the material handling by 50% and obviously the size of downstream processing equipment. The North T zone will provide 3,400 of the 5,000 tonnes which means Cheetah will have to open the Basal zone to meet the balance of the supply contract.

Looking at today's prices on Shanghai Metal Market (SMM) the separated value of this contract is over US$286 million. Assuming Vital gets 1/3 of the value for the concentrate this would produce revenues of over US$95 million of which US$92 million would come from Nd/Pr. Details of the agreement are not revealed so REEtec may be a toll arrangement which could produce more revenue for Vital though I expect the initial target would be to sell La, Nd and Pr in Europe as there are customers in Europe.

Interestingly the extraction plant is located beside the Saskatchewan Research Council (SRC) which has announced that they will be building a rare earth separation facility to process monazite by 2024. SRC has two rare earth experts from China on staff. SRC is also putting in an Nd/Pr metal facility which takes the oxide to the next level in the supply chain.

In addition to the Nechalacho project, Vital has a project in Tanzania called Wigu Hill. Vital has signed a project development and option agreement with Montero Mining & Exploration Ltd. (TSXV: MON), to acquire and develop the Wigu Hill project. The Wigu Hill project is a light rare earth element deposit and consists of a large carbonite complex with bastnaesite mineralization with a NI 43-101 Inferred resource estimate of 3.3Mt at 2.6% light REOs. This is also a bastnaesite mineral.

Overall Vital appears well on the way to producing commercial quantities of rare earth concentrate, a first in Canada. Questions that do need to be answered are what are the costs of operating an open pit mine in Northern Canada and the costs to transport material to Saskatoon.

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# Avalon Advanced Materials Don Bubar on the Acceleration of the Separation Rapids Lithium

# Project

written by InvestorNews | October 11, 2022
In this InvestorIntel interview with host Tracy Weslosky, Avalon Advanced Materials Inc.'s (TSX: AVL | OTCQB: AVLNF) President, CEO and Director Don Bubar talks about their lithium extraction technology and about securing a $3M convertible security funding to accelerate Separation Rapids Lithium Project.

In the interview, which can also be viewed in full on the InvestorIntel YouTube channel (click here to access InvestorChannel.com), Don starts, "We've been in this space for 25 years…while 25 years ago was a bit early for battery materials, we knew it would have a day and that day has finally come." Don also provides an update on reactivating Avalon's East Kemptville Tin Project which "was the only ever primary tin producer in North American history." Emphasizing how tin has emerged as a very important technology metal due to its growing usage in many technology applications, Don talks about Avalon creating a new supply.

To access the full InvestorIntel interview, click here

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# The Dean's List – Part 1: What rare earths company will benefit from Canada's commitment to critical minerals?

written by InvestorNews | October 11, 2022

## Part 1: Avalon Advanced Materials Inc.

Since the start of the very unnecessary war in Ukraine both federal and provincial governments in Canada have made numerous announcements with respect to critical materials, supply chain, EV battery manufacturing, and a whole host of other related subjects. The province of Ontario made a big splash in March, first announcing its strategy for 'critical minerals' worth C$3.5 billion to Ontario's economy followed shortly by a C$4.9 billion electric vehicle battery plant in Windsor, Ontario. Then in April, the Federal Government got in on the action with

Budget 2022, proposing up to C$3.8 billion in support over eight years to implement Canada's first Critical Minerals Strategy.

All these initiatives could have material impacts on several companies in the mining sector in Canada. Against this backdrop, we will begin a series of articles looking at the companies that could benefit from this government support to help position Canada to lead the way in supplying materials for clean technology, healthcare, aerospace, and computing, that will continue to be in high demand for years to come.

We'll start the series by looking at an Ontario based mining company providing investors with exposure to lithium, rare earths, cesium, tantalum, feldspars, tin and indium. Avalon Advanced Materials Inc. (TSX: AVL | OTCQB: AVLNF) is a Canadian mineral development company specializing in sustainably produced materials for clean technology. 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. Additionally, Avalon is evaluating opportunities to apply an innovative, new extraction technology to recover rare earths and other metals from acid mine drainage at closed mine sites and remediate the environmental liability.

Unlike typical articles about companies where we focus on what a company is up to and where the next catalyst may come from, this series is going to look at how a company may be able to tap into some of the cash governments are pledging to the industry or benefits that may accrue due to policy changes. Accordingly, let's review a few of the highlights from the various announcements.

Both Ontario and the Federal Budget announcements included funding to improve the regulatory framework, which has the

potential to backfire in my opinion, but if successful this should be a benefit to any and all mining companies in Canada. However, the Ontario announcement goes one step further to include the development of a regulatory framework for recovery of minerals from mine tailings and waste with an amendment to the Mining Act. Avalon has been looking at several such opportunities including East Kemptville Tin-Indium and the Cargill past-producing phosphate mine site in Ontario with concentrations of rare earths, scandium and zirconium in the tailings. Unfortunately, East Kemptville is in Nova Scotia so it falls outside of Ontario's jurisdiction, but if Avalon can advance their process, I'm sure there is ample opportunities to apply the technology to many of Ontario's past producing mines.

Another pillar in the Ontario strategy was the encouragement of domestic processing and creating resilient local supply chains. The announcement of the Stellantis and LG Energy Solution JV marking Canada's first lithium-ion electric vehicle (EV) battery manufacturing plant went a long way toward supporting this initiative. And what goes into lithium-ion batteries? Lithium of course, and Avalon is well positioned with two lithium projects located in Ontario. That strikes me as being in the right place at the right time with the right commodity. We'll see how this plays out over the next few years as the plant is scheduled to begin production in early 2025.

Another catch-all for all junior miners in Canada was the Federal Budget announcement of the introduction of a new 30% Critical Mineral Exploration Tax Credit for specified mineral exploration expenses incurred in Canada and renounced to flow-through share investors. The tax credit would apply to eligible materials including nickel, lithium, cobalt, graphite, copper, rare earth elements, vanadium, tellurium, gallium, scandium, titanium, magnesium, zinc, platinum group metals, and uranium. This should help any explorer in the sector looking to fund

upcoming drilling programs by providing another avenue of raising capital.

As long as governments don't get in the way of their good intentions, we could be on the verge of a golden era for critical mineral explorers, miners and processors in Canada. Correspondingly, over the next several weeks we'll continue to look at companies like Avalon that find themselves well-positioned to take advantage of this renewed focus by the Canadian Government on the security of supply, to exploit Canada's abundance of valuable critical minerals.

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# Rare Earths and the Challenges of Building a Domestic EV Material Supply Chain

written by InvestorNews | October 11, 2022
In this InvestorIntel PDAC 2022 Panel on rare earths and "Building the EV Material Supply Chain", host Byron W King is joined by Search Minerals Inc.'s (TSXV: SMY | OTCQB: SHCMF) President, CEO, and Director Greg Andrews, Appia Rare Earths & Uranium Corp.'s (CSE: API | OTCQX: APAAF) President Frederick Kozak, Avalon Advanced Materials Inc.'s (TSX: AVL | OTCQB: AVLNF) President, CEO and Director Don Bubar, and Vital Metals Limited's (ASX: VML | OTCQB: VTMXF) Managing Director Geoff Atkins.

In the video, which can also be viewed in full on the InvestorIntel YouTube channel (click here), the panel discusses

whether there is enough rare earths supply to meet the future demand for electric vehicles. Vital Minerals' Geoff Atkins talks about the shift from government pressure to move to electric vehicles to increasing consumer demand for EVs, especially outside the United States, and the different processing requirements for EV batteries and rare earths magnet components which make "just in time" supply chain inventory management impossible.

Avalon President Don Bubar notes that China's rare earths dominance came from how "they saw before anyone in the West how you have to create the downstream manufacturing and processing capacity in order to justify creating the primary supply, and that's a foreign concept to the traditional mining industry here in Canada." Greg Andrews agrees that the challenge is "trying to create rare earths industry in Canada that doesn't exist," but as Appia president Frederick Kozak points out, the new Saskatchewan rare earths processing facility makes domestic processing more attractive "as opposed to having to ship it to China for processing."

To access the full InvestorIntel interview, click here

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**About Search Minerals Inc.**

Led by a proven management team and board of directors, Search is focused on finding and developing Critical Rare Earths Elements (CREE), Zirconium (Zr) and Hafnium (Hf) resources within the emerging Port Hope Simpson – St. Lewis CREE District of southeast Labrador. The Company controls a belt 63 km long and 2 km wide and is road accessible, on tidewater, and located within 3 local communities. Search has completed a preliminary economic assessment report for **FOXTROT**, and a resource estimate

for **DEEP FOX**. Search is also working on three exploration prospects along the belt which include: **FOX MEADOW, SILVER FOX** and **AWESOME FOX**.

Search has continued to optimize our patented Direct Extraction Process technology with support from the Department of Industry, Energy and Technology, Government of Newfoundland and Labrador, and from the Atlantic Canada Opportunity Agency. We have completed two pilot plant operations and produced highly purified mixed rare earth carbonate concentrate and mixed rare earth concentrate for separation and refining. We also recognize the continued support by the Government of Newfoundland and Labrador for its Junior Exploration Program.

Search Minerals was selected to participate in the Government of Canada Accelerated Growth Service ("AGS") initiative, which supports high growth companies. AGS, as a 'one-stop shop' model, provides Search with coordinated access to Government of Canada resources as Search continues to move quickly to production and contribute to the establishment of a stable and secure rare earth element North American and European supply chain.

To learn more about Search Minerals Inc., click here

**About Appia Rare Earths & Uranium Corp.**

Appia is a Canadian publicly-listed company in the rare earth element and uranium sectors. The Company is currently focusing on delineating high-grade critical rare earth elements and gallium on the Alces Lake property, as well as exploring for high-grade uranium in the prolific Athabasca Basin on its Otherside, Loranger, North Wollaston, and Eastside properties. The Company holds the surface rights to exploration for 105,026 hectares (259,525 acres) in Saskatchewan. The Company also has a 100% interest in 12,545 hectares (31,000 acres), with rare earth element and uranium deposits over five mineralized zones in the

Elliot Lake Camp, Ontario.

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

**About Vital Metals Limited**

Vital Metals Limited (ASX: VML) is Canada's first rare earths producer following commencement of production at its Nechalacho rare earths project in Canada in June 2021. It holds a portfolio of rare earths, technology metals and gold projects located in Canada, Africa and Germany.

To know more about Vital Metals Limited, click here

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

written by InvestorNews | October 11, 2022

In this InvestorIntel interview with host Tracy Weslosky, Avalon Advanced Materials Inc.'s (TSX: AVL | OTCQB: AVLNF) President, CEO and Director, Don Bubar talks about Avalon's recent partnership agreement 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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# Market applauds Avalon Advanced Materials' lithium battery materials refinery news

written by InvestorNews | October 11, 2022

Governments around the world are starting to figure out what China realized 20 (or more) years ago, if you want to be at the leading edge of a technology you need to secure and support the resources that facilitate it. Unfortunately, it took a global pandemic followed by a war on European soil to disrupt supply chains and impact resource availability, for developed nations to begin to figure this out. But perhaps the light switch has

been turned on and the politicians of the world have finally recognized that simply saying something repeatedly doesn't necessarily make it happen. I will spare readers from another rant from me, even though it's like shooting fish in a barrel, but let's just hope that rumblings out of Ottawa, with respect to the next Canadian budget are accurate. It's anticipated that Canada's federal budget will include an investment of at least $2 billion for a strategy to accelerate the production and processing of critical minerals needed for the electric vehicle battery supply chain. Specifically, the investment would be focused on critical minerals including nickel, lithium, cobalt and magnesium.

What a novel concept. I wonder how they managed to come up with such a creative idea? (I really need to find an emoticon or something that expresses when I am being sarcastic). Nevertheless, it's progress so we should all be happy that an encouraging step is being made by politicians. This progress follows on the heels of another supportive announcement, this time from the provincial government of Ontario, where they defined their own first-ever Critical Minerals Strategy. Premier Doug Ford is quoted as saying "The Critical Minerals Strategy is our government's blueprint to connect industries, resources and workers in our province's north to the future of manufacturing in the south as we build up home-grown supply chains."

The timing of these announcements couldn't dovetail any better with news from Avalon Advanced Materials Inc. (TSX: AVL | OTCQB: AVLNF) on Monday that it has signed a binding letter of intent to establish Ontario's first regional lithium battery materials refinery in Thunder Bay, Ontario. I can state with confidence that their timing was excellent because the market rewarded Avalon shareholders handsomely, rallying the stock by 48% on the day. So let's have a little closer look at why investors got so excited about this particular press release.

Avalon 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 as witnessed by the fact that the Company recently reported its tenth (yes, they have been doing this for 10 years) annual comprehensive sustainability report. In a nutshell, Avalon Advanced Materials is an ESG focused company at the forefront of sustainable best practices in cleantech mineral development. Find me a box that doesn't tick.

Timing of all this coming together is somewhat fortuitous for the Company, given they weren't waiting around for any government support. They recognized a long time ago what their roadmap to success would include. Simply finding critical materials wasn't going to be enough, Avalon identified that to control their destiny, they had to control their destiny. To get production started another key step is to have a centrally located lithium refinery that could purchase concentrates produced locally to make the battery material products. Avalon had a much bigger vision whereby a lithium refiner would be designed to accept lithium minerals concentrates, not only from Avalon's Separation Rapids Lithium Project, but also from other aspiring new producers from the many lithium pegmatite resources that occur in northwestern Ontario. Monday's announcement states this refinery will operate as a separate private business, called Avalon Lithium Inc., a newly established Avalon

subsidiary.

Avalon's do-it-yourself (sustainably and responsibly) mantra has resulted in fantastic timing as both Provincial and Federal governments have only just realized what needs to be done at the same time as Avalon is actually doing it. Combine that with an exemplary ESG track record and you have yourself a pretty exciting investment opportunity. Even after the recent run-up, Avalon's market cap is sitting at roughly C$77.5 million. Is that a fair price for a company doing the right things, in the right way, at the right time?

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# Avalon to Build a Lithium Processing Facility as Ontario Adopts an Unprecedented Industrial Policy to Become the Global Leader in the Critical Material Supply Chain

written by InvestorNews | October 11, 2022
First, it was China, then the USA, Australia, and now Canada; developing a critical minerals strategy to support the green revolution this decade.

Last week the Ontario Government announced that the: "Province's First-Ever Critical Minerals Strategy Positions Ontario as Global Leader. **Strategy will unleash Ontario's mineral potential**

**and support a made-in-Ontario electric vehicle supply chain**…….The Critical Minerals Strategy is a five year roadmap to: better connect the mines in the north with the manufacturing sector in the south, in particular to Ontario-based electric vehicle (EV) and battery manufacturing; tap into new and growing markets, including electric vehicles, batteries, telecommunications and national defense; and secure Ontario's place in the global supply chain for decades to come."

*(Note: Bold emphasis by the author.)*

As part of the announcement, the Province is investing $24 million over three years toward Ontario's Junior Exploration Program. Industry insiders have told InvestorIntel they expect this is just the beginning and expect "funding to support development of the mid-stream processing capacity will be a much bigger number".

For investors now is the time to start looking at promising critical minerals companies with projects in Ontario, Canada. Today's company fits the bill perfectly with multiple critical mineral projects in Ontario.

Avalon Advanced Materials Inc. (TSX: AVL | OTCQB: AVLNF) (Avalon) has three projects in Ontario, Canada, and five in total throughout Canada. The projects have exposure to lithium, tin, rubidium and indium; as well as rare earth elements, tantalum, cesium and zirconium. Avalon's most advanced project is the Separation Rapids Lithium Project near Kenora in Ontario. Avalon is working on a plan for a JV to build a lithium-ion battery materials refinery in Thunder Bay, Ontario.

**Avalon's Projects summary**

- **Separation Rapids Lithium Project (Ontario) (100% owned)** – 2018 PEA completed.

- **Lilypad Cesium-Tantalum- Lithium Project (Ontario) (100% owned)** – Exploration stage.
- **Warren Township Feldspar Project (Ontario) (100% owned renewable lease) –** PFS completed.
- **Nechalacho Rare Earth Elements Property (Northwest Territories) (100% owned lower zone)** – Feasibility Study stage (ownership is below a depth of 150 metres including the Basal Zone deposit).
- **East Kemptville Tin-Indium Project (Nova Scotia) (100% owned)** – PEA stage.

Given the past 15 months 11x surge in the price of lithium (and huge demand forecasts this decade), Avalon has decided to focus on developing its Separation Rapids Lithium Project, while continuing to advance other projects, including re-activating its Lilypad Cesium-Tantalum-Lithium Project. Both Avalon's lithium projects are in Ontario, Canada.

**REF: An update on Avalon's progress to develop their Ontario lithium projects**

**Separation Rapids Lithium Project**

At Avalon's Separation Rapids Lithium Project the Company is working on acquiring a demonstration scale dense media separation (DMS) plant to begin processing the 5,000t bulk sample collected earlier in 2022. Next Avalon will begin producing the lithium bearing mineral, petalite, concentrate product samples for glass ceramic end-users that have expressed interest and for further battery materials testwork.

At the Snowbank petalite pegmatite discovery made in 2018, Avalon's latest results were successful to extend the known strike length by 50% to 127 metres and confirmed the widespread presence of coarse grained petalite mineralization. Avalon is now planning to proceed with a winter diamond drilling program

to begin to delineate the size potential of the new Snowbank discovery as well as testing several other lithium pegmatites in the same area. Preparation of the necessary access trails is underway and work toward securing the necessary drilling permits is progressing.

The current 2017 M& I Resource estimate of the Project is 8.2MT at 1.37% $Li_2O$ and 0.36% $Rb_2O$ plus Inferred 1.2MT at 1.33% $Li_2O$ and 0.361% $Rb_2O$.

Source: Avalon Advanced Materials company presentation

**Lilypad Cesium-Tantalum-Lithium Project**

In September 2021 Avalon reported results that confirmed the exceptional cesium enrichment in several Lithium-Cesium-Tantalum (LCT) pegmatite dyke occurrences at the Lilypad Project. LCT deposits are more valuable lithium projects due to having valuable by-products of cesium and tantalum. Sub-samples assay results averaged 3.02% $Cs_2O$, 1.07% $Li_2O$ and 0.03% $Ta_2O_5$, similar to the average grade of the historic resource. Avalon stated: "The Pollucite Dyke, with a historic resource estimate of 340,000 tons grading 2.294% $Cs_2O$ and 0.037% $Ta_2O_5$ based on 9 holes drilled to a maximum vertical depth of 250 metres and along a strike length of just 140 metres, remains open for expansion to depth and along strike."

*Note: Historical Resources are not yet to be relied upon.*

Given the surge in lithium prices, I would not be surprised to see Avalon look to discover further lithium on the property. Avalon says that their next steps will be to plan for a diamond drilling program to test all the new targets including the western extension of the Pollucite Dyke.

**Thunder Bay battery metals refinery**

In 2020, Avalon signed a LOI with Rock Teck Lithium to build a lithium refinery in Thunder Bay. However since then, the plan has evolved with Avalon stating (regarding the Rock Teck JV): "So, while we have not ruled out the possibility of partnering on a plant (in Thunder Bay), it seems less likely now given that we are now going down different paths in terms of scale, process flowsheet and types of products." In a February 2022 update, Avalon stated: "Still planning to establish a new lithium battery materials refinery in Thunder Bay. Lots of interest from international consumers of lithium battery materials and planning a partnership arrangement."

**Avalon is working on a plan to build a JV lithium refinery in Thunder Bay, Ontario; with one or possibly two of their lithium projects as potential feed**

Source: Avalon Advanced Materials company presentation

**Closing remarks**

Avalon Advanced Minerals trades on a market cap of only C$52 million which seems extraordinary given they have 5 projects in Canada, several of which are reasonably advanced. Also, the fact that several projects contain very high value minerals such as lithium, tin, rubidium and several rare earths.

Don't miss this opportunity.