

# Market applauds Avalon Advanced Materials' lithium battery materials refinery news

written by InvestorNews | April 7, 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 | April 7, 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<sub>2</sub>O and 0.36% Rb<sub>2</sub>O](#) plus Inferred 1.2MT at 1.33% Li<sub>2</sub>O and 0.361% Rb<sub>2</sub>O.



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<sub>2</sub>O, 1.07% Li<sub>2</sub>O and 0.03% Ta<sub>2</sub>O<sub>5</sub>](#), 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<sub>2</sub>O and 0.037% Ta<sub>2</sub>O<sub>5</sub> 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.

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# **Can Avalon Advanced Materials ride the lithium tidal wave?**

written by InvestorNews | April 7, 2022

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



Source: [Trading Economics](#)

One under the radar lithium junior is [Avalon Advanced Materials Inc.](#) (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 [PEA](#) of their 100% owned Separation Rapids Lithium Project in 2018, resulting in a pre-tax NPV8% of [\\$156 million](#), post tax IRR of 22.7%, CapEx C\$77.7 million with a 20 year mine life.

Then in March 2021, Avalon [announced](#) 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% Li<sub>2</sub>O) 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 [stated](#): “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 [stated](#): “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.

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# Developing critical materials for the green economy in a sustainable way is the Avalon Advanced Materials' highway

written by InvestorNews | April 7, 2022

[Avalon Advanced Materials Inc.](#) (TSX: AVL | OTCQB: AVLNF) is a new breed of resource company that places environmental stewardship at the top of the list of priorities as opposed to it being an afterthought. The Company has embraced the principles of sustainability as core to its business practice and has made a strong commitment toward implementing corporate social responsibility best practices and recently secured [a top 5% ESG Risk rating](#) amongst its peer companies from Sustainalytics.

Avalon is a Canadian mineral development company that operates primarily in Canada with a focus on the metals and minerals for use in clean energy and new technology including lithium, rare earths, cesium, tin, indium, gallium, germanium, tantalum and zirconium. The Company is in various stages of developing three of its five mineral resource properties with particular emphasis on lithium, cesium and rare earths.

Avalon's most advanced project is the 100% owned Separation Rapids Lithium Project, located in the Paterson Lake Area of Ontario. The Separation Rapids deposit is a potential source of lithium minerals for use in the glass and ceramics industry as well as lithium compounds for the battery industry. The company

completed a Pre-Feasibility Study in 1999 to produce petalite (the predominant lithium mineral at Separation Rapids) for glass-ceramics. A new Preliminary Economic Assessment model was created in 2016 to produce lithium battery materials, which was subsequently updated in 2018 based on new glass-ceramic markets. The simplified business model with initial focus on lithium mineral concentrates for glass and ceramics has an initial CAPEX of C\$77.7 million (475,000 tpa mill capacity) for a 20 year operational life with average annual revenues of C\$90 million and average annual costs of C\$60 million for an NPV pre-tax (8% discount rate) of \$156 million and an IRR (pre-tax) of 27.1%.

Building on the Separation Rapids opportunity, [Avalon recently announced it has entered into 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. 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.

Another example of what makes Avalon different than most resource companies is the binding [LOI signed in February](#) for four industrial minerals properties and a demonstration-scale processing plant located at Matheson, Ontario to process the tailings from a historic phosphate mining operation at the site. Work done has demonstrated that the tailings contain phosphate levels ranging from 15-20%  $P_2O_5$  and can be sold "as is" for use in various agricultural fertilizer products. Additionally, analytical work done on the tailings indicates the presence of significant concentrations of rare earths, scandium and zirconium, which preliminary tests indicate will be recoverable

through additional processing. The phosphate-rich tailings are already generating revenues and additional processing of the tailings could provide significant potential for future revenue growth. This is a great example of Avalon's core values working in harmony. The company gets access to a closed mine site with potential to recover critical minerals like rare earths from the mine wastes, while remediating the long term environmental liability.

Avalon is a leader among mineral developers in adopting best practices to reduce its environmental footprint, prevent water contamination and engage with local communities. This focus gives Avalon a strategic advantage when it comes to securing grants, funding and partnerships with governments and First Nations, let alone the evolving investment community. Aligning the company with its stakeholders' values reduces risk and creates opportunities like the Fort William First Nation LOI. Just remember, [it's not easy being green](#), but it can be profitable.

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## **Don Bubar of Avalon Advanced Materials talks about the surge in interest following the Rock Tech LOI**

written by InvestorNews | April 7, 2022

Don Bubar, President and CEO of [Avalon Advanced Materials Inc.](#) (TSX: AVL | OTCQB: AVLNF), talks to InvestorIntel's Tracy

Weslosky about Avalon's recent surge in stock price and volume after announcing their letter of intent with Rock Tech Lithium to collaborate on the development of a North American lithium process facility.

Avalon's announcement has attracted a lot of industry attention. "This is the fifth media interview I've done to talk about that news release," Don told Tracy. "Avalon and Rock Tech have long been aspiring producers of lithium from resources in northern Ontario," he continued, "and we had this shared vision of how this centrally located processing facility would make a lot of sense for us to collaborate to create different lithium products and serve different markets."

"The demand for lithium battery materials is escalating," he continued, "with plans to establish EV and battery manufacturing capacity here. The interest is building all the time and is accelerating now with government policy," Don told Tracy. "And the push for more rapid adoption of electric vehicle technologies is obviously creating new demand with government providing incentives to get these new facilities started."

Don went on to describe how with Rock Tech's German-based management's connections in Europe, this arrangement to collaborate on a new lithium process facility will help Avalon grow its business both in Europe and North America.

Don Bubar is recognized as one of the global experts on rare earths and lithium in particular, and sees an exciting "opportunity to put a processing facility in a central location close to transportation infrastructure and access to market for the product."

In the interview Don also provides an update on Avalon's Nechalacho Rare Earth Elements Property, and its deal with Australia's Vital Metals. "They are pretty much ready to go," he

said, as soon as pandemic conditions allow. “The idea all along is for them to take advantage of the small, relatively easy to process resource called the T-Zone,” he continued, “and once you get that production and supply chain started then we could be in a position to scale it up.”

To watch the full interview, [click here](#).

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# Avalon Advanced Materials Separation Rapids Lithium Project progresses, EV investors look north for critical materials

written by InvestorNews | April 7, 2022

It is not very often that an investor can buy a company with exposure to both lithium and key magnetic rare earths. One company that offers exposure to both is [Avalon Advanced Materials Inc.](#) (TSX: AVL | OTCQB: AVLNF) ('Avalon'). Avalon has five critical materials projects across Canada, providing investors with exposure to **lithium, rare earths (neodymium, dysprosium)**, cesium, tantalum, feldspars, tin and indium.



With the electric vehicle (EV) boom set to take off, companies such as Tesla are planning to grow EV production by 50%pa reaching 20 million new EVs pa by 2030. At [Tesla Battery Day](#) Tesla suggested an aggressive industry wide target of 10TWh of Li-ion batteries pa by 2030 to meet EV demand (assumes a switch to 100% EVs).

Tesla says that's a 100 fold increase on 2019 levels. This suggests demand for EV metals (such as lithium and the magnetic rare earths) looks likely to surge this decade and create a super-cycle for the EV metal miners.

**100% electric transportation requires 100x growth in EV battery production this decade**



[Source](#): Tesla Battery Day video

**Avalon's focus projects for lithium (Separation Rapids, Lilypad) and rare earths (Nechalacho)**



[Source](#)

Avalon's Separation Rapids Lithium Project is located 70 km by road north of Kenora, Ontario, Canada. It holds one of the largest "complex-type" lithium-cesium-tantalum pegmatite deposits in the world. A [PEA](#) was completed in 2018 resulting in a pre-tax NPV8% of [\\$156m](#), post tax IRR of 22.7%, CapEx C\$77.7m with a 20 year mine life. In a [recent news](#) Avalon has been doing metallurgical test work with the overall objectives of reducing costs, improving recoveries and optimizing lithium product quality. Avalon has previously developed a proprietary process flowsheet to produce a high purity lithium hydroxide product from petalite. The process limits waste by recycling of the

sulphuric acid solvent. Avalon and partners are now optimizing the final stages of the process, which involves the use of electrolysis to produce lithium hydroxide. The results will enable finalizing equipment selection and design. A further 2,500 tonne bulk sample extraction program is set to commence next. With Ontario Premier Doug Ford [recently announcing](#) Ontario's interest in establishing new battery materials supply chains in the province, Avalon is investigating collaborative opportunities to establish a lithium processing facility in Northwestern Ontario.

Avalon's Lilypad Cesium Property, located 150 km northeast of Pickle Lake, Ontario, is an exploration stage project with cesium-lithium-tantalum mineralization. It has the potential to be a secondary lithium supply source for Avalon. Avalon has [recently re-activated the Project](#) due to increasing demand for cesium. Planned follow-up work will initially involve mineralogical and analytical testwork, which will be followed by metallurgical process testwork to identify the most efficient methods for concentrating the pollucite ore and recovering by-product tantalum and lithium.

Avalon's flagship Nechalacho Rare Earth Elements Property is located at Thor Lake, Northwest Territories, Canada. Avalon's main focus is the deeper HREE Basal Zone at the property. The Basal Zone retained by Avalon contains a rich polymetallic rare metals resource, with potential for economic recovery of several rare earth elements. A [Feasibility Study](#) was completed in 2013 on the Basal Zone resulting in a pre-tax NPV10% of \$1.35 billion (post-tax NPV10% of \$900m). The post-tax IRR was 19.6%. CapEx was \$1.575b. Sales of the five critical REO (neodymium, europium, terbium, dysprosium and yttrium) account for over 82% of the separated REO revenues. Avalon has also retained a 3% NSR on the near surface T-Zone and Tardiff Zone at the Nechalacho Rare Earth Elements Property, [bought by](#) Cheetah Resources back

in 2019. Avalon could also potentially collaborate with the newly planned SRC Rare Earths Processing Facility to be established in Saskatchewan with plans to be operational by late 2022.

**EVs are coming in all shapes and sizes and they will require huge amounts of EV metals such as lithium and rare earths**

Avalon Advanced Materials Inc. stock is [up 87.5%](#) over the past year and trades on a market cap of C\$26m.

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## **Don Bubar on Avalon's 20 years in rare earths and their diversified asset base of critical materials**

written by InvestorNews | April 7, 2022

"We have been in rare earths business for over 20 years now," Don Bubar, President, CEO and Director of [Avalon Advanced Materials Inc.](#) (TSX: AVL | OTCQB: AVLNF), tells InvestorIntel's Tracy Weslosky [in an interview](#). "And we are very well known among investors in the US for our lead role in the rare earths bubble 10 years ago. Whenever there is new development and news headline related to the risk on security of supply, then you will see speculative trading activity in Avalon."

"Our strategy has been to have a diversified asset base," Bubar continued. "That gives us exposure to broad range of these new emerging critical materials. We are basically positioned to

react to when there is a new demand in the marketplace.”

Bubar went on to say that Avalon is working with a partner on its Nechalacho rare earth elements property and has maintained its main resource for any future upside. “We continue to look at other possibilities to create new rare earths supplies, by looking at how we can use new technology to recover rare earths from non-traditional sources such as historic mine wastes,” he said.

Bubar also commented on Avalon’s Separation Rapids Lithium Project: “Our focus now is on taking advantage of the opportunity in lithium markets. We are permitted now to recover a bulk sample to finalize our process flowsheet, do a pilot plant run and produce some product samples for customers who have expressed interest in the product in the glass industry as well as start to revisit serving the battery materials market going forward.”

To access the complete interview, [click here.](#)

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## **Don Bubar on the ORE Act and Avalon’s lithium and rare earths projects**

written by InvestorNews | April 7, 2022

“The ORE Act is a great start. There is no doubt that if we are

going to see these rare earths supply chain established in North America government has to help by providing incentives to businesses and entrepreneurs to make that whole supply chain happen. It is not as simple as just starting a new mining operation and everything will happen easily after that. I think it is encouraging that they recognize that now that they do need to provide these incentives and maybe we will actually start to see them.” States Don Bubar, President, CEO and Director of [Avalon Advanced Materials Inc.](#) (TSX: AVL | OTCQB: AVLNF), in an interview with InvestorIntel’s Tracy Weslosky.

Don went on to say that the whole COVID-19 pandemic has raised awareness in the public about the vulnerability of supply chain in North America by relying on a sole source of supply, especially when it comes from a country like China. He added, “There is increasing trade tension between China and the US. If that continues to grow then for sure there is real risk of China weaponizing their control on the supply chain of rare earths and other critical minerals.”

Don also provided an update on Avalon’s Separation Rapids Lithium Project. He said that the company is increasingly seeing real opportunities with their Separation Rapids Lithium Project. There is a lot of innovation happening in the glass ceramics space that prefers a form of lithium that is in the high purity mineral petalite at Separation Rapids. The demand from the battery sector is also continuing to grow.

To access the complete interview, [click here](#)

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# Avalon's 'Holy Grail' plan-of-operations for near term production of NA critical materials

written by InvestorNews | April 7, 2022

Avalon is a company with big plans. With several advanced critical materials projects all in the safe jurisdiction of Canada. Using smart extraction processes and technology, and in some cases JV project partners, Avalon aims to cost-effectively bring several new projects into production.

Additionally Avalon is working on extracting valuable materials from waste materials, that offer potential for near term revenue streams. Many Governments and large miners are interested to facilitate the removal and further processing of waste material.

[Avalon Advanced Materials Inc.](#) (TSX: AVL | OTCQB: AVLNF) is focused on critical minerals and cleantech materials including rare earths, lithium, tantalum, cesium, cobalt, nickel, tin, and others with near term production potential.

Avalon has adopted a strategy of sourcing low CapEx, high value projects which can be put into small scale production quickly and cost effectively. To this end Avalon has several JV partners in their different projects.

**Avalon Advanced Minerals project pipeline**



## [Source](#)

**Nechalacho Rare Earth Elements Property (Thor Lake, Northwest Territories, Canada) (3% NSR on T-Zone and Tardiff Zone bought by Cheetah Resources, and 100% owns the HREE Basal Zone).**

Avalon has sold some of the project (the near surface T-Zone and Tardiff Zone resources) to Cheetah Resources for C\$5 million cash. Avalon will receive a 3% NSR on these areas should they reach production. Cheetah Resources recently [announced](#) they are moving rapidly toward small-scale production of rare earths including neodymium and praseodymium.

The Basal Zone retained by Avalon contains a rich polymetallic rare metals resource, with potential for economic recovery of the heavy rare earth elements, neodymium, praseodymium, lithium, zirconium, beryllium, niobium and tantalum. A [Feasibility Study](#) was completed in 2013 on the Basal Zone resulting in a NPV10% of \$1.35 billion.

You can read more in a recent [InvestorIntel article](#).

## **Separation Rapids Lithium Project**

[Separation Rapids Lithium Project](#) is 70 km by road north of Kenora, Ontario. The deposit is one of the largest “complex-type” lithium-cesium-tantalum pegmatite deposits in the world, unusual in its enrichment in the rare, high purity lithium mineral petalite. A [PEA](#) was completed in 2018 resulting in a pre-tax NPV8% of [\\$156 million](#), post tax IRR of 22.7%, CapEx of \$77.7 million with a 20 year mine life. Avalon is currently doing process development work to optimize the process flowsheet and produce new petalite product samples for glass-ceramic manufacturers who have expressed strong interest in Avalon’s product. Also of interest is that Avalon is testing advanced processing methods such as sensor-based ore-sorting and dense

media separation.

Next steps include processing a larger bulk product sample for customer qualification, which would then lead to off-take agreements to support project development. In 2020, subject to financing, other work will include a [\\$3-5 million](#) program to prepare for construction of mine and process plant in 2020-21 to produce lithium mineral concentrates. Added to this will be a FS, environmental assessments, and project permitting.

## **Separation Rapids Lithium Project**



### [Source](#)

**Will Scarlett Rare Earths Recovery Project (near Marion, Illinois, USA) – Avalon to earn-in up to 50% from project owner Coal Strategy Advisors**

The Will Scarlett Project is interesting as Avalon plans to process rare earths from coal mine wastes. Sampling of the waste has revealed high concentrations of total rare earth oxides in excess of 500 ppm. Also notable is that no significant uranium or thorium has been detected associated with the rare earths at Will Scarlett. The coal mine also has other metallic elements such as cobalt, nickel, lithium, manganese and zinc in mine waste materials.

Avalon President and CEO, Don Bubar, [stated](#):

“In our research to date on rare earths in coal mine wastes, Will Scarlett stands out as exceptional in terms of the levels of rare earths present in the AMD. Like our East Kemptville Tin Project in Nova Scotia, Will Scarlett provides Avalon with an opportunity to extract value out of previously-mined waste materials at a relatively low cost, and potentially fully



remediate the long term environmental liability associated with acid mine drainage at the site.”

Avalon plans to participate in the installation and operation of a demonstration facility (pilot plant) to scale up the process at the Will Scarlett site, assuming funding can be arranged. The goal is to demonstrate how this technology can recover separated rare earths at a much lower cost than traditional solvent extraction technology, thereby making it economic to recover rare earths from lower grade resources, such as mine wastes.

### **Lilypad Cesium Property**

[Lilypad Cesium Property](#) (150 km northeast of Pickle Lake, Ontario) is at exploration stage with cesium-lithium-tantalum mineralization. Past discoveries has included cesium assaying up to 6.205%  $\text{Cs}_2\text{O}$  over 1.70 metres and tantalum mineralization assaying over 0.10%  $\text{Ta}_2\text{O}_5$  found in numerous tantalum-cesium-lithium pegmatite dykes. This summer Avalon plans to follow up on encouraging results obtained during past work programs.

### **Warren Township Anorthosite Project**

[Warren Township Anorthosite Project](#) (100 km west of Timmins, Ontario). The tenement hosts a significant resource of high purity anorthosite, consisting of up to 98% high calcium plagioclase feldspar. The PFS was completed in 2003.

### **East Kemptville Tin-Indium Project**

[East Kemptville Tin-Indium Project](#) (45 km northeast of Yarmouth, Nova Scotia). PEA completed in 2018. There is the opportunity to sustainably fully rehabilitate the site through recovery of tin from stockpiles using new ore-sorting technology at a very low CapEx. Currently the project is on hold.

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# Lifton and Avalon's Bubar discuss how to start a new rare earths supply chain outside of China quickly

written by InvestorNews | April 7, 2022

"We are moving forward with the original plan we developed with them (Cheetah Resources Pty Ltd.) which was to start with a very small scale project to develop a resource in a separate deposit that occurs on the property (Nechalacho Project). A small satellite deposit called the T-Zone that had work done on historically where there is a small but very interesting resource very rich in bastnaesite in a pegmatite. The mineralogy is so simple that we can make a concentrate with just using sensor-based ore sorting technology which makes it very low cost to implement and relatively easy to permit because you are not creating any toxic waste that creates environmental concerns... It could be possible to get something started there in as little as a year and start to show the world on how you can do things a little bit differently to start a new rare earths supply chain outside of China." States Don Bubar, President, CEO and Director of [Avalon Advanced Materials Inc.](#) (TSX: AVL | OTCQB: AVLNF), in an interview with InvestorIntel's Jack Lifton.

Don went on to say that there is a lot of interest in the government circles in both Canada and the US to establish a new rare earths supply chain. He continued by providing an update on Avalon's Letter of Intent signed with a private US company, Coal Strategy Advisors, LLC, to earn up to a 50% interest in the Will

Scarlett Rare Earths Recovery Project located near Marion, Illinois. He said that Will Scarlett is a closed coal mine site where Coal Strategy Advisors discovered a very high level of rare earths enrichment in the acid mine drainage and in the precipitates generated from lime treatment of the acid mine drainage to neutralize the acidity. He said that Will Scarlett provides Avalon with an opportunity to extract rare earths out of previously-mined waste materials at a relatively low cost.

To access the complete interview, [click here](#)

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