

Avalon Advanced Materials Announces 28% Increase in Measured and Indicated Mineral Resources at JV Separation Rapids Project in Ontario Canada

Toronto, Ontario--(Newsfile Corp. - February 27, 2025) - [Avalon Advanced Materials Inc.](#) (TSX: AVL) (OTCQB: AVLNF) ("**Avalon**" or the "**Company**"), in partnership with its Joint-Venture ("**JV**") partner SCR-Sibelco NV ("**Sibelco**"), is pleased to announce the results of an updated Mineral Resource Estimate (MRE) for the Separation Rapids Project in Kenora, Ontario. This update builds on a year of extensive drilling and data analysis, further refining the geological model of the previously announced mineral resource estimate (MRE) from Avalon's [August 10, 2023, news release](#).

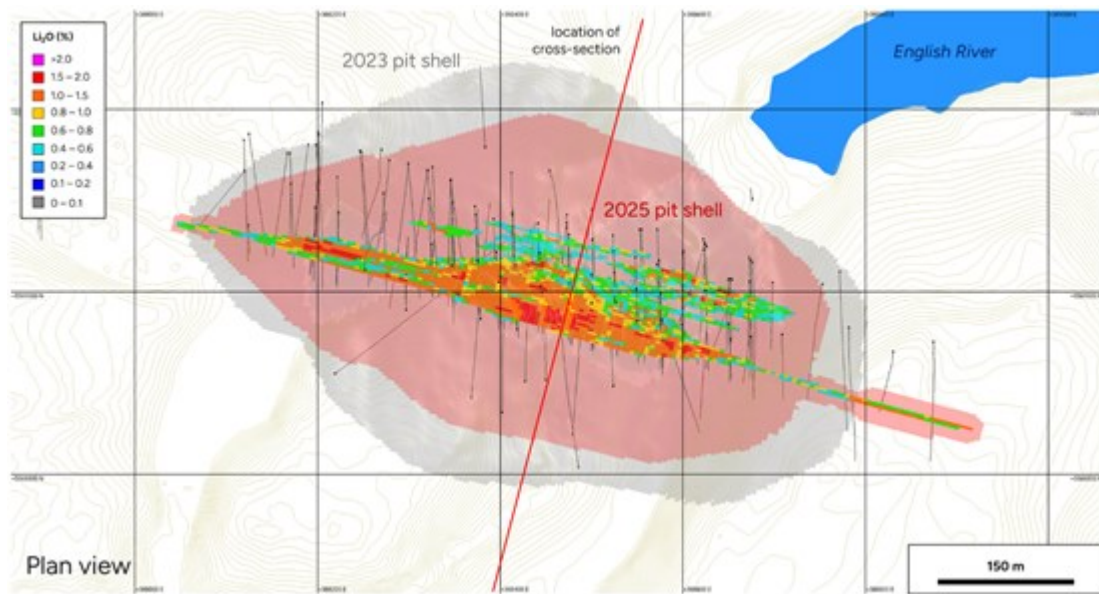
The updated MRE for the Separation Rapids Project was prepared by SLR Consulting (Canada) Ltd., is supported by 29 new drill holes and shows an increase of 28% in Measured + Indicated Mineral Resource tonnage and a decrease of 13% in Inferred Mineral Resource tonnage compared to the 2023 MRE.

Key Highlights, effective January 30, 2025

- As of January 30, 2025, open pit Measured and Indicated Mineral Resources are estimated at **10.73 Mt grading 1.27% LiIO for 136 kt contained LiIO** and Inferred Mineral Resources include **0.46 Mt grading 0.84% LiIO for 3.8 kt contained LiIO**.
- Compared to the 2023 MRE, a significant portion of the open pit mineral resources was upgraded to the **Measured + Indicated category [+8% contained LiIO]**.
- Combined open pit and underground Measured and Indicated Mineral Resources are estimated to total **12.98 Mt grading 1.34% LiIO for 173 kt LiIO**. Additionally, Inferred Mineral Resources are estimated to total **2.29 Mt grading 1.46% LiIO for 33 kt LiIO**.
- The MRE shows contained LiIO metal oxide increases of **28% in the Measured + Indicated categories and decrease of 13% in the Inferred category**.

Scott Monteith, President and CEO commented, "The updated Mineral Resource Estimate for the Separation Rapids Project reflects the steady progress we have made in further defining this lithium deposit. The increase in Measured and Indicated resources strengthens our understanding of the project's potential and provides greater confidence as we continue to advance its development. We remain committed to a disciplined and methodical approach, working closely with our JV partner, Sibelco, to evaluate the best path forward in alignment with market conditions and Canada's critical minerals strategy. We will embark on our 2025 exploration program and will strategically target Lilypad for Spodumene and Cesium."

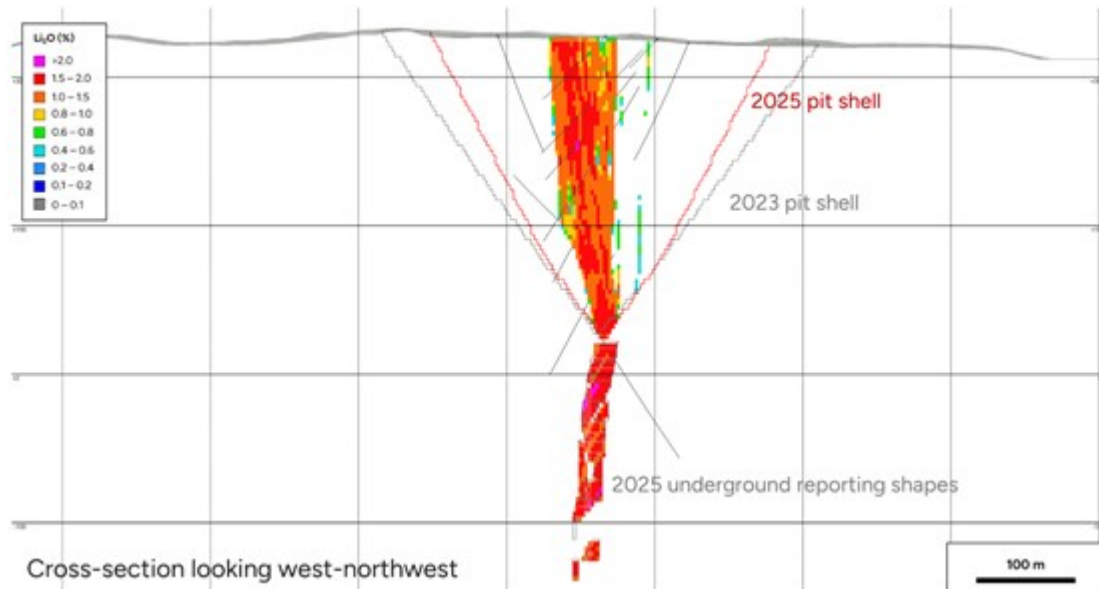
Figure 1: Comparison of the Current and 2023 Pit Shells in Plan View



To view an enhanced version of this graphic, please visit:

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Figure 2: Comparison of the Current and 2023 Pit Shells in Cross-Section



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The updated MRE includes 29 new surface diamond drill holes totalling 8,921 m drilled since the previous MRE completed by SLR in 2023 (SLR 2023). A summary of the updated 2025 MRE is provided in Table 1.

Table 1: Separation Rapids Mineral Resource Summary, Effective January 30, 2025

Description	Classification	Tonnage (Mt)	Li ₂ O (%)	Contained Li ₂ O (t)
Open Pit	Measured	4.33	1.28	55,282
	Indicated	6.41	1.27	81,147
	Measured + Indicated	10.73	1.27	136,429
	Inferred	0.46	0.84	3,817
	Measured	-	-	-

Underground	Indicated	2.24	1.64	36,877
	Measured + Indicated	2.24	1.64	36,877
	Inferred	1.83	1.62	29,680
Total	Measured	4.33	1.28	55,282
	Indicated	8.65	1.36	118,024
	Measured + Indicated	12.98	1.34	173,306
	Inferred	2.29	1.46	33,497

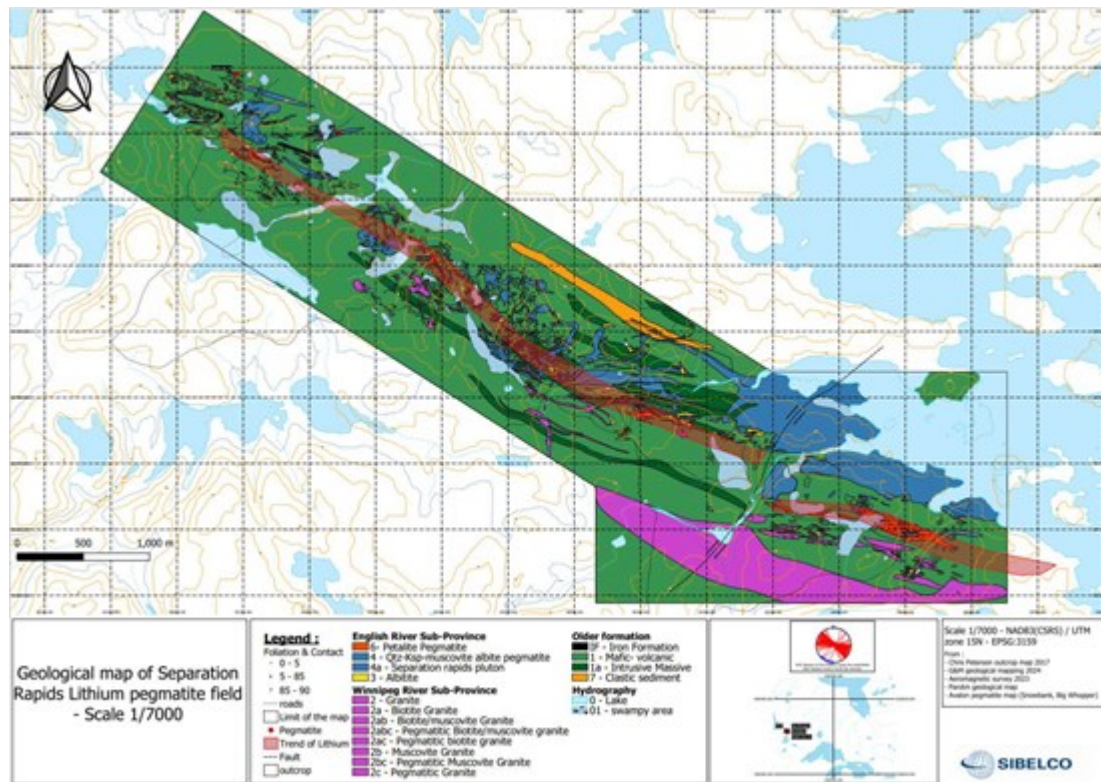
Notes:

1. CIM(2014) definitions were followed for Mineral Resources.
2. Mineral Resources are reported using a 4.25% Li₂O petalite concentrate price assumption of US\$1,000/t with an exchange rate of US\$1 = C\$1.30.
3. Open pit Mineral Resources are reported from a block model regularized to 5 m x 3 m x 5 m parent block size at a 0.48% Li₂O cut-off grade (COG) in a Whittle resource shell. The Whittle resource shell and open pit COG are based on a mining cost of C\$5.50/t, a general and administration (G&A) cost of C\$3.50/t, a processing cost of C\$55.00/t, and a recovery of 40%.
4. Underground Mineral Resources are reported from a block model with a minimum sub-block size of 1 m within Deswik Stope Optimizer (DSO) resource panels which were generated using a break-even 1.46% Li₂O COG. The underground break-even COG grade is based on a mining cost of C\$120/t, a G&A cost of C\$3.50/t, a processing cost of C\$55.00/t, a recovery of 40%, and an exchange rate of US\$1 = C\$1.30. The DSO resource panels are minimum 20 m by 10 m by 3 m wide.
5. Mineral Resources are reported based on a minimum thickness of approximately 3 m.
6. Average bulk densities were assigned to the blocks and range between 2.62 t/m³ and 2.66 t/m³ for the lithium pegmatite.
7. Numbers may not add due to rounding.
8. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

The MRE was prepared in accordance with CIM (2014) definitions as incorporated by reference into National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101).

For 2025, Avalon will advance lithium mineral resource development activities at the Separation Rapids Lithium Project, focusing on metallurgical, geotechnical, and environmental studies. The planned work program includes extensive research on lithium mineral recovery and process development to further delineate the potential of petalite, spodumene, and lepidolite. These efforts will involve mineralogical analysis, flotation testing, and dense media separation studies. Additionally, geotechnical and hydrological assessments will support the design of potential pit slopes, while ongoing environmental baseline studies will aid future permitting efforts.

Field mapping completed in 2024 has successfully delineated the northwest trend of the Separation Rapids pegmatite field, which extends from the Separation Rapids to the Snowbank and Glitter lithium pegmatites. In 2025, targeted drilling will be conducted to define the lithium-bearing volumes along this trend, enhancing the understanding of the project's resource potential.



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Qualified Person (QP) and NI 43-101 Disclosure

Volker Moeller, Ph.D., P.Geo. (ON), Senior Resource Geologist at SLR Consulting (Canada) Ltd., is the designated Qualified Person for this news release within the meaning of National Instrument 43-101 ("NI 43-101") and has reviewed and verified that the technical information contained herein is accurate and approves of the written disclosure of same. The Qualified Person is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the MRE.

About Avalon Advanced Materials Inc.

Avalon Advanced Materials Inc. is an emerging Canadian manufacturing company focused on vertically integrating the Ontario lithium supply chain, by developing the Lake Superior Lithium Facility, Ontario's first midstream lithium hydroxide processing facility in Thunder Bay, Ontario, a strategic link in bridging the lithium resources of northern Ontario with the downstream EV battery manufacturing base in southern Ontario and North America. The Company, through its joint venture with SCR-Sibelco NV, is currently developing its Separation Rapids lithium deposit near Kenora, ON, while also continuing to advance the lithium focused Snowbank and Lilypad Projects. Avalon is also advancing its Nechalacho Rare Earths and Zirconium Project located in the Northwest Territories. This deposit contains critical minerals for use in advanced technologies in the communications and defense industries among other sectors.

For questions or feedback, please email the Company at ir@avalonam.com or contact Ms. Rachel Naji, Investor Relations at 416-364-4938.

Cautionary Statement Regarding Forward-Looking Information

This news release contains "forward-looking information" within the meaning of applicable Canadian securities legislation. Forward-looking information includes exploration in 2025 (targeting Lilypad) and studies (geotechnical, metallurgical, environmental etc.) at the project. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "add" or "additional",

"advancing", "anticipates" or "does not anticipate", "appears", "believes", "can be", "conceptual", "confidence", "continue", "convert" or "conversion", "deliver", "demonstrating", "estimates", "encouraging", "expand" or "expanding" or "expansion", "expect" or "expectations", "forecasts", "forward", "goal", "improves", "increase", "intends", "justification", "plans", "potential" or "potentially", "promise", "prospective", "prioritize", "reflects", "robust", "scheduled", "suggesting", "support", "top-tier", "updating", "upside", "will be" or "will consider", "work towards", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might", or "will be taken", "occur", or "be achieved".

Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including risks associated with mineral exploration and development operations such as: environmental hazards and economic factors as they affect the cost and success of the Company's capital expenditures, the ability of the Company to obtain required permits and approvals, the ability of the Company to obtain financing, uncertainty in the estimation of mineral resources, uncertainty with respect to the ability to successfully construct and develop the Company's lithium processing facility, the price of lithium, no operating history, no operating revenue and negative cash flow, land title risk, the market price of the Company's securities, the economic feasibility of the Company's mineral resources and the Company's commercial viability, inflation and uncertain global economic conditions, uncertain geo-political shifts and risks, successful collaboration with indigenous communities, changes in technology and advancements in innovation may impact the development of the Company's technology innovation centre and its lithium hydroxide processing facility, future pandemics and other health crises, dependence on management and other highly skilled personnel, title to the Company's mineral properties, the ongoing war in Ukraine and Israel, extensive government and environmental regulation, reliance on artificial intelligence technology to influence mining operations, volatility in the financial markets, uninsured risks, climate change, threat of legal proceedings, as well as those risk factors discussed or referred to in the annual information form of the Company dated November 28, 2024 (the "AIF") under the heading "Description of the Business - Risk Factors". Forward-looking information is based on the reasonable assumptions, estimates, analysis and opinions of management made in light of its experience and perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances at the date that such statements are made, but which may prove to be incorrect. Although the Company believes that the assumptions and expectations reflected in such forward-looking information are reasonable, undue reliance should not be placed on forward-looking information because the Company can give no assurance that such expectations will prove to be correct. In addition to other factors and assumptions identified in the AIF, assumptions have been made regarding, among other things: management of certain of the Company's assets by other companies or joint venture partners, the Company's ability to carry on its exploration and development activities without undue delays or unbudgeted costs, the ability of the Company to obtain sufficient qualified personnel, equipment and services in a timely and cost effective manner, the ability of the Company to operate in a safe, efficient and effective manner, the ability of the Company to obtain all necessary financing on acceptable terms and when needed, the accuracy of the Company's resource estimates and geological, operational and price assumptions on which these are based and the continuance of the regulatory framework regarding environmental matters. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions that may have been used. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. The Company does not undertake to update any forward-

looking information, except in accordance with applicable securities laws.



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