



July 22, 2024

## **Avalon Advanced Materials intersects 1.67% Li<sub>2</sub>O over 105.6m and 1.68% Li<sub>2</sub>O over 66.2m at Big Whopper Deposit, Separation Rapids**

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TORONTO, ON - [Avalon Advanced Materials Inc.](#) (TSX: [AVL](#) and [OTCQB](#): AVLNF) is pleased to report the first batch of drill results for the 2024 winter drill campaign (total 10 holes) from the Separation Rapids Project in Kenora, Ontario (the “Project”). *See Figure 1.* The 2024 winter drill campaign was conducted by the joint venture company Separation Rapids Ltd. Separation Rapids Ltd is a joint venture between SCR-Sibelco NV (“Sibelco”; 60% ownership) and Avalon Advanced Materials Inc. (40%).

The results represent 512 assay results from 5 diamond drill holes completed as part of the 2024 expansion and infill drill campaign at the current 750m strike long Big Whopper Deposit. *See Figure 2.* The successful drill program focused on upgrading the 2023 Mineral Resource Estimation classification as well as to expand the mineral resources.

### **Highlights include:**

- SR24-114 intersected 1.67% Li<sub>2</sub>O over 105.6 meters from 313.5 meters depth and 1.78% Li<sub>2</sub>O over 21.5 meters from 143.5 meters depth
- SR24-113 intersected 1.68% Li<sub>2</sub>O over 66.2 meters from 292.2 meters depth and 1.95% Li<sub>2</sub>O over 32.6 meters from 121.0 meters depth
- SR24-115 intersected 1.81% Li<sub>2</sub>O over 13.8 meters from 93.5 meters depth
- SR24-116 intersected 1.69% Li<sub>2</sub>O over 8.9 meters from 313 meters depth and 1.67% Li<sub>2</sub>O over 12.7 meters from 325.3 meters depth

*All quoted intersections comprise a cutoff grade of 0.5% Li<sub>2</sub>O. All significant assay intervals are reported in Table 1.*

Scott Monteith, CEO and Director of Avalon Advanced Materials Inc. commented, “We are very excited with these fantastic drill results, which are a true reflection of the exploration upside potential of the project. Our technical team is eager to follow up on some of the longer intercepts to better understand the depth potential for resource expansion. We continue to advance on our Thunder Bay Lithium processing facility and expect more news in the coming weeks.”

The results from the first batch of the 2024 drilling campaign identifies areas of added value for the main pegmatites with SR24-113 and SR24-114 both intersecting values  $\geq 0.5\%$  Li<sub>2</sub>O over 50-meter intervals, opening the main pegmatite. See Figure 3. Eastern step out drilling of the current conceptual pit shows continued mineralization filling in a gap with the potential to upgrade mineral resource classification. See Figure 4.

Progress at Separation Rapids continues to advance with ongoing geotechnical work and mineralogical studies to facilitate in the eventual mine plan and processing optimization.

Hydrogeological testing and evaluation will be starting in August with continued monitoring and a follow up Phase 2 planned for review for the upcoming 2025 program.

Environmental field work was completed in June 2024 as part of the baseline and permitting processes and is in reporting and review stages. Continued engagement with local communities has been and will continue to be a priority.

A property wide mapping and sampling program will commence late July 2024 with a focus on satellite targets and areas of limited geological data for further evaluation of the promising potential on the property. The outlined program will prioritize following an interpreted trend from the Big Whopper to the western extent of the property. This mapping program will cover approximately 5 kilometers along strike.

**Figure 1** – Location of Separation Rapids Project

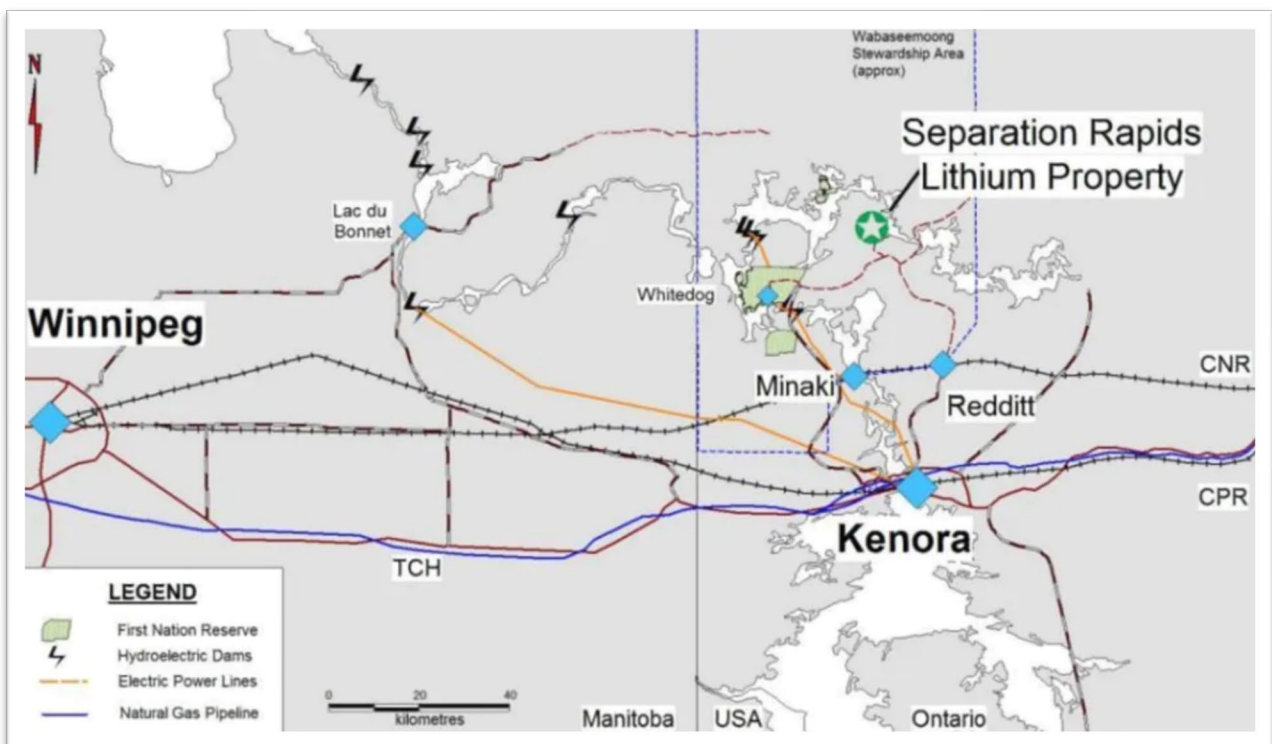
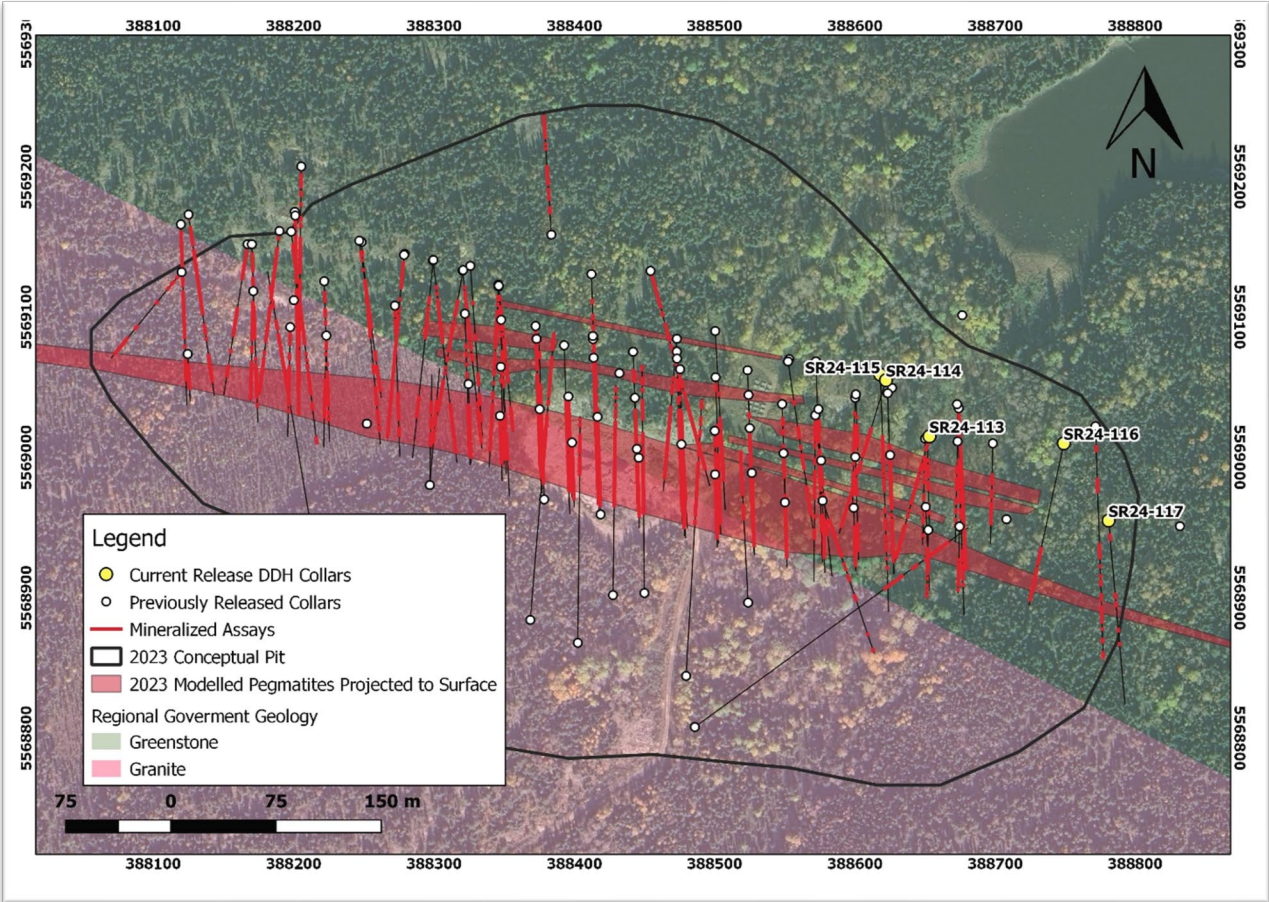
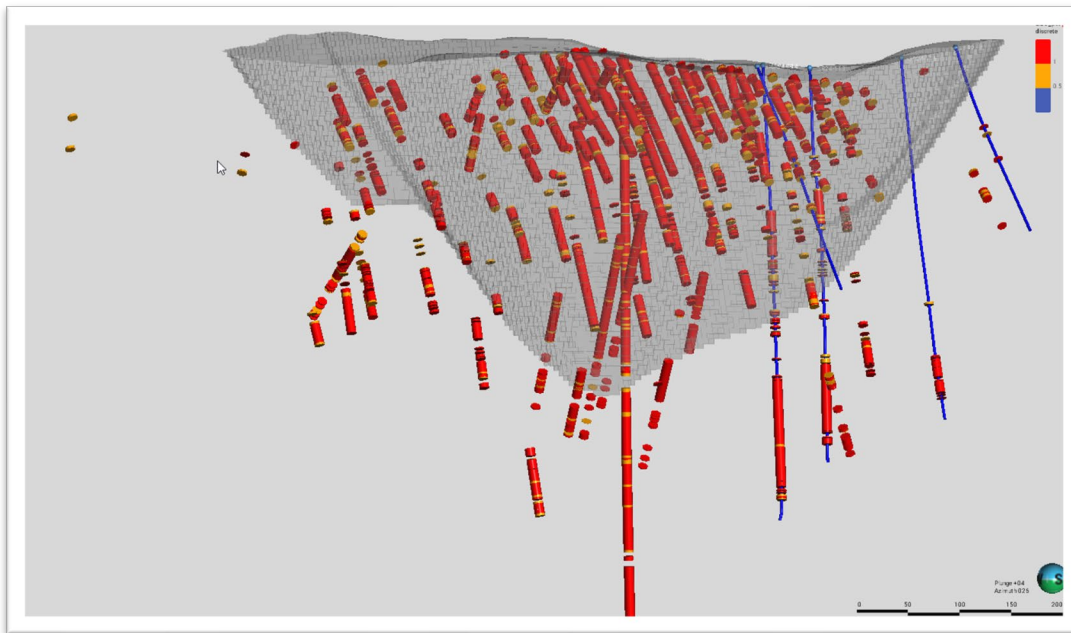


Figure 2: Big Whopper Deposit with current released hole locations highlighted.

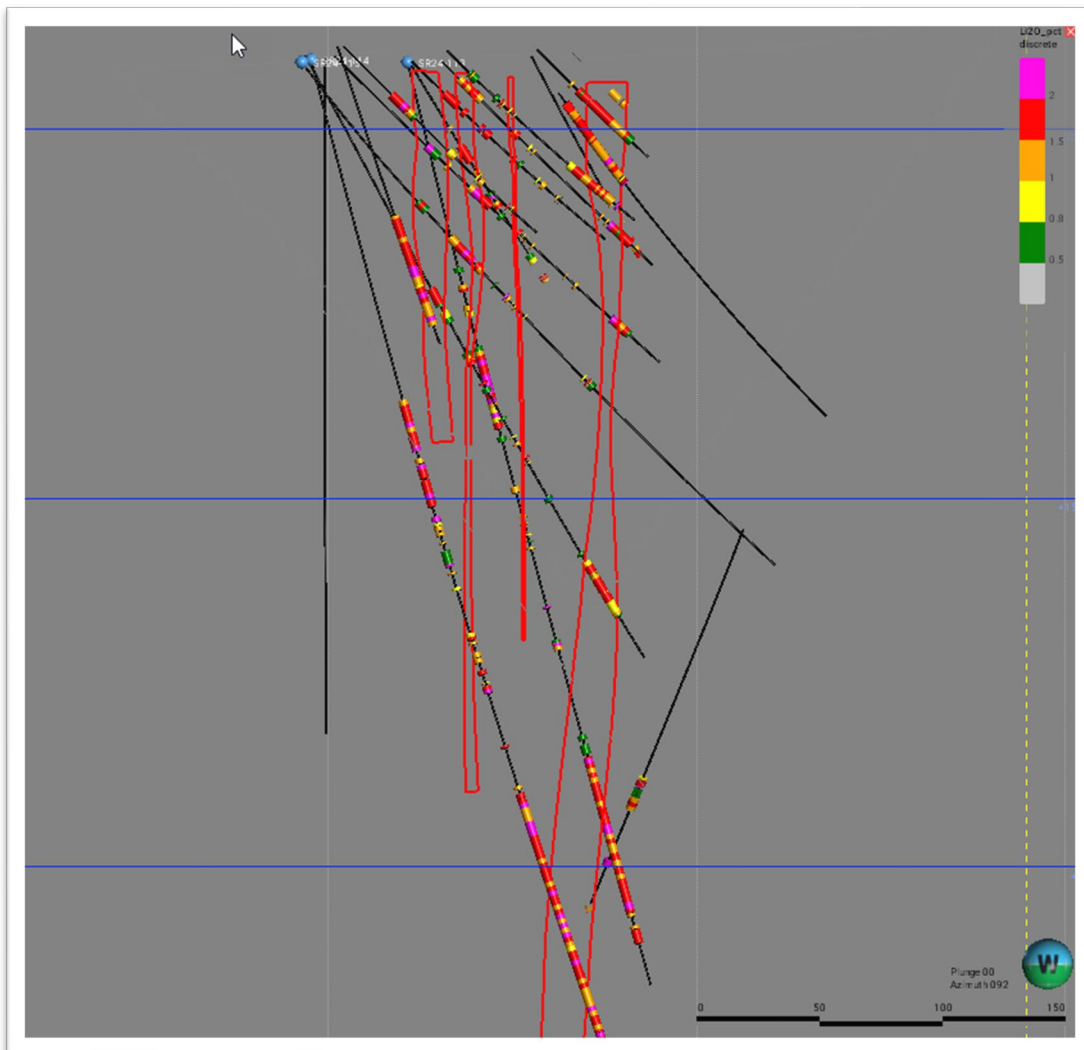


**Figure 3:** Long Section of the Big Whopper (View NNE) Incorporating all drilling up to and including SR24-117, representing 8,961.4 meters and assays above 0.5% Li<sub>2</sub>O. Current release drill traces in blue.



*Five of the Five drill holes returned significant drill intercepts greater  $\geq 0.5\%$  Li<sub>2</sub>O.*

**Figure 4:** Vertical Cross section showing SR24-113 and SR24-114 with large intercepts illustrating the potential to increase the main pegmatite with the new modelling.



**Table 1: Significant drill intersections**

|          | Az  | Dip | From (m)      | To (m)        | Core Length (m) | True Thickness (m) | Li2O%       | Intercept                      |
|----------|-----|-----|---------------|---------------|-----------------|--------------------|-------------|--------------------------------|
| SR24-113 | 195 | -76 | 93.25         | 96.15         | 2.90            | 2.81               | 1.40        | 1.4 Li2O% over 2.9m            |
|          |     |     | 101.85        | 103.90        | 2.05            | 1.99               | 1.25        | 1.25 Li2O% over 2.05m          |
|          |     |     | <b>121.00</b> | <b>153.60</b> | <b>32.60</b>    | 31.63              | <b>1.95</b> | <b>1.95 Li2O% over 32.6m</b>   |
|          |     |     | 178.10        | 180.60        | 2.50            | 2.43               | 1.38        | 1.38 Li2O% over 2.5m           |
|          |     |     | 190.40        | 191.10        | 0.70            | 0.68               | 1.39        | 1.39 Li2O% over 0.7m           |
|          |     |     | 193.60        | 194.00        | 0.40            | 0.39               | 1.40        | 1.4 Li2O% over 0.4m            |
|          |     |     | 203.70        | 204.60        | 0.90            | 0.87               | 1.47        | 1.47 Li2O% over 0.9m           |
|          |     |     | 228.65        | 229.35        | 0.70            | 0.68               | 2.51        | 2.51 Li2O% over 0.7m           |
|          |     |     | 244.00        | 247.00        | 3.00            | 2.91               | 1.75        | 1.75 Li2O% over 3m             |
|          |     |     | <b>292.25</b> | <b>358.45</b> | <b>66.20</b>    | 64.23              | <b>1.68</b> | <b>1.68 Li2O% over 66.2m</b>   |
|          |     |     | 358.70        | 360.00        | 1.30            | 1.26               | 1.39        | 1.39 Li2O% over 1.3m           |
|          |     |     | 364.00        | 365.30        | 1.30            | 1.26               | 1.42        | 1.42 Li2O% over 1.3m           |
|          |     |     | 365.60        | 371.35        | 5.75            | 5.58               | 1.61        | 1.61 Li2O% over 5.75m          |
| SR24-114 | 197 | -75 | <b>143.50</b> | <b>165.00</b> | <b>21.50</b>    | 20.77              | <b>1.78</b> | <b>1.78 Li2O% over 21.5m</b>   |
|          |     |     | 170.90        | 176.60        | 5.70            | 5.51               | 1.93        | 1.93 Li2O% over 5.7m           |
|          |     |     | <b>177.20</b> | <b>188.50</b> | <b>11.30</b>    | 10.91              | <b>1.86</b> | <b>1.86 Li2O% over 11.3m</b>   |
|          |     |     | 192.75        | 194.85        | 2.10            | 2.03               | 2.08        | 2.08 Li2O% over 2.1m           |
|          |     |     | 195.60        | 196.70        | 1.10            | 1.06               | 0.88        | 0.88 Li2O% over 1.1m           |
|          |     |     | 197.00        | 198.75        | 1.75            | 1.69               | 1.39        | 1.39 Li2O% over 1.75m          |
|          |     |     | 199.50        | 201.00        | 1.50            | 1.45               | 1.14        | 1.14 Li2O% over 1.5m           |
|          |     |     | 203.70        | 204.35        | 0.65            | 0.63               | 1.45        | 1.45 Li2O% over 0.65m          |
|          |     |     | 213.00        | 214.00        | 1.00            | 0.97               | 2.87        | 2.87 Li2O% over 1m             |
|          |     |     | 244.00        | 245.30        | 1.30            | 1.26               | 1.53        | 1.53 Li2O% over 1.3m           |
|          |     |     | 246.15        | 247.20        | 1.05            | 1.01               | 1.12        | 1.12 Li2O% over 1.05m          |
|          |     |     | 250.65        | 252.70        | 2.05            | 1.98               | 1.33        | 1.33 Li2O% over 2.05m          |
|          |     |     | 253.25        | 255.00        | 1.75            | 1.69               | 1.12        | 1.12 Li2O% over 1.75m          |
|          |     |     | 258.25        | 260.05        | 1.80            | 1.74               | 1.79        | 1.79 Li2O% over 1.8m           |
|          |     |     | 264.90        | 267.90        | 3.00            | 2.90               | 2.01        | 2.01 Li2O% over 3m             |
|          |     |     | 290.40        | 291.30        | 0.90            | 0.87               | 1.79        | 1.79 Li2O% over 0.9m           |
|          |     |     | 307.75        | 309.10        | 1.35            | 1.30               | 1.39        | 1.39 Li2O% over 1.35m          |
|          |     |     | 310.75        | 312.90        | 2.15            | 2.08               | 1.70        | 1.7 Li2O% over 2.15m           |
|          |     |     | <b>313.15</b> | <b>418.80</b> | <b>105.65</b>   | 102.05             | <b>1.67</b> | <b>1.67 Li2O% over 105.65m</b> |
|          |     |     | 416.25        | 418.80        | 2.55            | 2.46               | 1.50        | 1.5 Li2O% over 2.55m           |
|          |     |     | 421.40        | 423.15        | 1.75            | 1.69               | 1.07        | 1.07 Li2O% over 1.75m          |
|          |     |     | 424.00        | 425.00        | 1.00            | 0.97               | 1.52        | 1.52 Li2O% over 1m             |
|          |     |     | 427.00        | 431.00        | 4.00            | 3.86               | 1.48        | 1.48 Li2O% over 4m             |
| SR24-    | 178 | -53 | 75.00         | 77.00         | 2.00            | 1.60               | 1.76        | 1.76 Li2O% over 2m             |

|          |     |     |        |        |       |       |      |                        |
|----------|-----|-----|--------|--------|-------|-------|------|------------------------|
| 115      |     |     | 93.50  | 107.30 | 13.80 | 11.02 | 1.81 | 1.81 Li2O% over 13.8m  |
|          |     |     | 105.50 | 107.30 | 1.80  | 1.44  | 2.79 | 2.79 Li2O% over 1.8m   |
|          |     |     | 108.55 | 112.50 | 3.95  | 3.15  | 1.38 | 1.38 Li2O% over 3.95m  |
|          |     |     | 126.25 | 126.90 | 0.65  | 0.52  | 2.03 | 2.03 Li2O% over 0.65m  |
|          |     |     | 127.40 | 128.30 | 0.90  | 0.72  | 1.49 | 1.49 Li2O% over 0.9m   |
|          |     |     | 131.90 | 132.65 | 0.75  | 0.60  | 1.44 | 1.44 Li2O% over 0.75m  |
|          |     |     | 134.55 | 134.80 | 0.25  | 0.20  | 1.28 | 1.28 Li2O% over 0.25m  |
|          |     |     | 174.20 | 175.00 | 0.80  | 0.64  | 1.65 | 1.65 Li2O% over 0.8m   |
| SR24-116 | 192 | -71 | 175.45 | 175.65 | 0.20  | 0.16  | 1.46 | 1.46 Li2O% over 0.2m   |
|          |     |     | 300.30 | 301.40 | 1.10  | 1.04  | 1.49 | 1.49 Li2O% over 1.1m   |
|          |     |     | 302.00 | 302.50 | 0.50  | 0.47  | 1.66 | 1.66 Li2O% over 0.5m   |
|          |     |     | 303.80 | 305.85 | 2.05  | 1.94  | 1.83 | 1.83 Li2O% over 2.05m  |
|          |     |     | 306.05 | 312.55 | 6.50  | 6.15  | 1.66 | 1.66 Li2O% over 6.5m   |
|          |     |     | 313.00 | 321.95 | 8.95  | 8.46  | 1.69 | 1.69 Li2O% over 8.95m  |
|          |     |     | 325.30 | 338.05 | 12.75 | 12.06 | 1.67 | 1.67 Li2O% over 12.75m |
|          |     |     | 340.15 | 340.45 | 0.30  | 0.28  | 1.64 | 1.64 Li2O% over 0.3m   |
| SR24-117 | 175 | -54 | 343.30 | 343.55 | 0.25  | 0.24  | 1.92 | 1.92 Li2O% over 0.25m  |
|          |     |     | 93.25  | 93.75  | 0.50  | 0.40  | 1.08 | 1.08 Li2O% over 0.5m   |
|          |     |     | 132.40 | 133.55 | 1.15  | 0.93  | 1.58 | 1.58 Li2O% over 1.15m  |

#### Rules for Intercept Calculation

- 1 - values of  $\geq 0.5\%$  pegmatite are reported with maximum waste interval of 1 meter included
- 2 - published intercepts still stand if intercepts are  $\geq 0.5\%$  when higher grade inclusions are removed
- 3 - each reported intercept supported by mineralized pegmatite as logged in drill core
- 4 - Zones of  $<0.5\%$  Li2O are not published as standalone, but included in intercept calculations if a continued zone is  $<1.0\text{m}$
- 5 - intercepts  $<0.5\text{m}$  are removed from table - comment in release will be noted

#### Qualified Persons

Disclosure of a scientific or technical nature in this news release was prepared under the supervision of Jessica Borysenko, P.Geo, ON. Member number 2279, Manager of Geology and Mines, Canada for Separation Rapids Ltd. Ms. Borysenko is a qualified person for the purposes of National Instrument 43-101, who has reviewed and approved the technical information included in this news release.

#### Quality Assurance-Quality Control ("QA/QC")

QA/QC protocols followed at the Big Whooper include the insertion of blanks and standards at regular intervals in each sample batch. Drill core is cut in half with one half retained at site, the other half tagged and sent to ALS in Thunder Bay.

#### Prep and Analytical Methods Used

PREP-33D – Log, Crush - Fine Crushing 90%  $<2\text{mm}$ , Split, Pulverize 1 kg split to 95%  $<106\text{um}$ .

1. ME-4ACD81 – this is a multielement analysis using four acid digestion, that includes lithium to 10,000 ppm (1%) Li (2.15% Li<sub>2</sub>O)
2. ME-ICP06 – is a “whole rock” analysis that covers components such as silicon, sodium, potassium and iron so is useful as a check on rock type, feldspar content and type, and amphibolite content.
3. ME-MS81 – is a fusion multielement analysis that includes important pegmatite elements such as Rb, Ta, Nb and Sn
4. F- IC881 – a fluorine specific analysis that clearly indicates whether lepidolite is present in the rock. Any value over 10,000 ppm (1%) F is likely to be Unit 6d – the lepidolite bearing unit.

Any sample that exceeds the lithium limits for ME-4ACD81 (1% Li, or 2.15% Li<sub>2</sub>O) is reanalyzed using method ME-ICP82b – a lithium specific method with limit of 10% Li (21% Li<sub>2</sub>O).

Pulps are to be returned to the project site.

### **Board Update:**

The Company is also pleased to announce that Mr. Alan Ferry has been re-appointed as Chair of the Board. Mr. Jan Holland has resigned from the Company’s Board of Directors. The Company thanks Mr. Holland for his service to the Company over the last year.

### **About Avalon Advanced Materials Inc.**

Avalon Advanced Materials Inc. is a Canadian advanced manufacturing company focused on vertically integrating the Ontario lithium supply chain. 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 Snowbank lithium and Lilypad lithium-caesium projects. Avalon is also working to develop 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.

In addition to these upstream activities, Avalon is executing on a key initiative to develop Ontario’s first midstream lithium hydroxide processing facility in Thunder Bay, ON, a vital link bridging the lithium resources of the north with the downstream EV battery manufacturing base in the south.

For questions or feedback, please email the Company at [ir@AvalonAM.com](mailto:ir@AvalonAM.com) or contact Ms. Rachel Naji, Investor Relations Manager 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, but is not limited to statements related to planned work at the Project, and that we expect more news in the coming weeks. 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, 2023 (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.