

Avalon Announces Updated Mineral Resource Estimate for Nechalacho Basal Zone, Revalidating Scale and Economic Development Potential of a Large, North American Source of Light and Heavy Rare Earth Elements

First Comprehensive Refresh of Mineral Resource and Economic Framework of Nechalacho Basal Zone Since 2013, Establishing a Current Technical Foundation Under S-K 1300

58.6 million tonnes of Measured and Indicated resources grading 1.49% TREO, plus 130.6 million tonnes of Inferred resources grading 1.31% TREO

Updated mineral resources incorporate current economic assumptions and US\$366.40/t Net Metal Revenue ("NMR") cut-off in assessing reasonable prospects for economic extraction

Neodymium, praseodymium, dysprosium and terbium account for approximately 88% of estimated in-situ REO value, highlighting Nechalacho's exposure to magnet-critical rare earth elements

Toronto, Ontario--(Newsfile Corp. - August 6, 2026) - [Avalon Advanced Materials Inc.](#) (TSX: AVL) (OTCQB: AVLNF) ("Avalon" or the "Company") is pleased to announce the completion of an updated Mineral Resource Estimate ("MRE") for the wholly-owned Basal Zone of the Nechalacho Rare Earth Elements Project ("Nechalacho" or the "Project"), located approximately 110 kilometers southeast of Yellowknife, Northwest Territories. The Basal Zone is a deeper mineralized zone underlying the near-surface Upper Zone and formed the basis of the Company's 2013 Definitive Feasibility Study ("DFS") prepared under Canadian National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101") and CIM standards at that time.

The updated MRE was independently prepared by Micon International Limited ("Micon"), which applied current geological, mining, metallurgical and economic assumptions to develop the mineral resource estimate. Micon also serves as the independent Qualified Person for the estimate. The MRE represents the first comprehensive re-estimation of Nechalacho's Basal Zone mineral resource since the DFS released in April 2013 and establishes a current technical and economic framework for the next stage of the Project's advancement. The MRE has an effective date of July 14, 2026 and was prepared in accordance with Subpart 1300 of Regulation S-K ("S-K 1300"), establishing a current mineral resource foundation as the Company advances Nechalacho's development, and pursues its planned U.S. exchange listing.

The updated MRE includes:

Table 1 - Updated Mineral Resource Estimate for Nechalacho Basal Zone

Classification	Tonnes (million)	NMR (US\$)	TREO Grade	ZrO ₂	Nb ₂ O ₅	Ta ₂ O ₅
Measured	10.3	787.4	1.52%	2.79%	0.36%	0.03%
Indicated	48.3	776.4	1.49%	2.69%	0.35%	0.03%
Measured + Indicated	58.6	778.4	1.49%	2.74%	0.35%	0.03%
Inferred	130.6	676.2	1.31%	2.43%	0.34%	0.03%

Resource Estimate Notes:

1. The effective date of the Mineral Resource Estimate is July 14, 2026.
2. In-situ total rare earth oxide (TREO) is inventoried and reported by the intended processing method. TREO refers to the sum-total of the REOs in the deposit. TREO includes the heavy rare earth oxides (HREO) consisting of Y_2O_3 , Eu_2O_3 , Gd_2O_3 , Tb_4O_7 , Dy_2O_3 , Ho_2O_3 , Er_2O_3 , Tm_2O_3 , Yb_2O_3 and Lu_2O_3 , and light rare earth oxides (LREO) consisting of La_2O_3 , CeO_2 , Pr_6O_{11} , Nd_2O_3 , and Sm_2O_3 .
3. The mineral resource estimate was determined using an NMR cut-off value of US\$366.40/t.
4. The mineral resources disclosed in this report were estimated using the SK-1300 standards and requirements for mineral resource and reserve definitions and the industry best practices guidelines for resource estimation.
5. The mineral resources reported were considered to be mined using an MSO shape for a Longhole mining method. The original block model was re-blocked to 15 m x 15 m x 15 m. Mineralized blocks outside of the underground mining area are not considered to be part of the MRE.
6. Mineral resources are reported below 150 m elevation above sea level to reflect property ownership agreements.
7. For the purpose of the block model and future economic studies, uranium and thorium were modelled as deleterious elements.
8. The mineral resource estimate has been classified according to the accepted definitions of Measured, Indicated and Inferred Resources.
9. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
10. The tonnage and metal contents are rounded to reflect that the numbers are an estimate and any discrepancies in the totals are due to the rounding effects.
11. Micon has not identified any legal, political, environmental, or other factors that could materially affect the potential development of the mineral resource estimate.

The resource is supported by an extensive drillhole database comprising 582 drill holes totaling approximately 120,000 meters. Importantly, the updated 2026 MRE represents both a technical and economic refresh of the Nechalacho resource. Micon constrained the resource within underground mineable shapes and applied updated commodity values, metallurgical recoveries, mining, processing, transportation and other operating-cost assumptions through a US\$366.40 per tonne NMR cut-off in determining the material considered to have reasonable prospects for economic extraction. As a result, the updated MRE does more than restate a historical geological inventory. It establishes a current resource foundation based on updated technical and economic assumptions from which Avalon can advance the next phase of technical and economic evaluation of Nechalacho.

Nechalacho's Exceptional Rare Earth Diversity Underpins Its Strategic Importance

One of Nechalacho's distinguishing characteristics is not simply its size, but the breadth of its rare earth mineralization. Specifically, the updated MRE reports grades for 15 individual rare earth oxides ("REOs"), including the four principal magnet rare earths-neodymium (Nd), praseodymium (Pr), dysprosium (Dy) and terbium (Tb)—together with lanthanum, cerium, samarium, europium, gadolinium, holmium, erbium, thulium, ytterbium, lutetium and yttrium. Collectively, these elements underpin applications spanning permanent magnets, electric vehicles, robotics, defense systems, aerospace,

advanced electronics, catalysts, medical technologies and numerous other high-value industrial applications.

Importantly, Micon's analysis indicates that the four principal magnet rare earth elements—neodymium, praseodymium, dysprosium and terbium—collectively represent approximately 88% of the estimated in-situ REO value of the resource as measured by contribution to REO revenue. Specifically, Neodymium and praseodymium account for approximately 45% and 10% value contribution, respectively, or approximately 55% on a combined basis, with dysprosium and terbium representing approximately 21% and 12% value contribution, respectively.

While the four principal magnet rare earth elements are expected to be the primary value drivers, Nechalacho's strategic importance extends well beyond those elements. Unlike many rare earth deposits that are primarily enriched in only a limited number of commercially significant elements, Nechalacho contains meaningful concentrations across a broad suite of both light and heavy rare earth elements. Avalon believes this mineral diversity enhances the Project's long-term strategic importance by providing exposure to numerous rare earth elements that support an increasingly diverse range of technologies and end markets.

In addition to the rare earth elements reported in the updated MRE, the resource estimate also reports zirconium, niobium and tantalum. Collectively, these additional metals further highlight the breadth of Nechalacho's mineral endowment and the Project's potential strategic relevance across a diverse range of industrial and critical-mineral applications. Their potential contribution to future project development will continue to be evaluated through subsequent technical and economic studies.

The updated MRE therefore reinforces Nechalacho's position not only as a significant magnet rare earth project, but as a compositionally diverse rare earth deposit with meaningful exposure to the full spectrum of commercially important light and heavy rare earth elements together with zirconium, niobium and tantalum that are increasingly essential to advanced manufacturing, clean energy, aerospace, defense technologies and secure Western critical-minerals supply chains.

Management Commentary

Scott Monteith, President and Chief Executive Officer, commented:

"Nechalacho offers exposure not only to the four principal magnet rare earths—neodymium, praseodymium, dysprosium and terbium—but also to an exceptionally broad suite of other light and heavy rare earth elements together with zirconium, niobium and tantalum. Avalon believes this breadth of mineralization is one of the Project's defining competitive strengths and further differentiates Nechalacho from many other rare earth development projects."

"At a time when governments and industry are increasingly focused on establishing secure Western supply chains for critical minerals, Nechalacho represents a unique opportunity: a large, extensively studied Canadian resource containing meaningful concentrations across a broad range of commercially important rare earth elements. Our objective now is to build on that foundation and evaluate a development pathway capable of translating this strategic resource into a commercially viable and financeable project."

Burl Joseph, Project Director, Nechalacho, commented:

"From a technical perspective, the updated MRE is supported by an unusually extensive body of work for a project at this stage of development - reflecting approximately C\$70 million in drilling and metallurgical work performed in support of the 2013 DFS and select additional drilling performed after that study's release. The underlying database comprises 582 drill holes totaling approximately 120,000 meters of drilling. That work supports 10.3 million tonnes classified as Measured and 48.3 million tonnes classified as Indicated, in addition to the substantial Inferred resource."

"The updated estimate brings this extensive geological database into a current resource model and provides the technical platform for the work ahead. Our focus now is on building upon that foundation through completing a PEA presently underway with Wood Canada Ltd., establishing an agreement with a processing partner to process a minimum of one ton of existing material in the coming quarters — generating samples essential to securing strategic offtake agreements and investment at the asset level — and progressing our plan to advance toward a new Definitive Feasibility Study following the release of the PEA in the fourth quarter."

Lorin Crenshaw, Chief Financial Officer, added:

"From an economic perspective, the significance of this MRE goes beyond updating Nechalacho's tonnage and grade. For the first time since 2013, the resource has been comprehensively evaluated using a current economic framework — including updated commodity prices, mining and processing cost assumptions and a Net Metal Revenue cut-off — to determine the material having reasonable prospects for economic extraction."

"This updated MRE establishes a current technical and economic foundation from which Avalon can advance Nechalacho toward a modern feasibility study and, ultimately, potential project development. We believe the resulting resources under current assumptions represent an important revalidation of Nechalacho's scale and economic development potential. The PEA currently underway is the logical next step in translating that updated foundation into a contemporary assessment of project economics."

Updated Mineral Resource Estimate

The updated MRE for the Nechalacho Basal Zone is summarized below:

Table 2 - Updated Mineral Resource Estimate for Nechalacho Basal Zone Detailed by REO

Item / Element	Measured	Indicated	Measured + Indicated	Inferred
Tonnes (million)	10.3	48.3	58.6	130.6
TREO % (Total Rare Earth Oxides)	1.517	1.489	1.494	1.306
La ₂ O ₃ % (Lanthanum)	0.246	0.241	0.242	0.216
CeO ₂ % (Cerium)	0.573	0.561	0.563	0.510
Pr ₆ O ₁₁ % (Praseodymium)	0.070	0.069	0.069	0.063
Nd ₂ O ₃ % (Neodymium)	0.267	0.263	0.264	0.241
Sm ₂ O ₃ % (Samarium)	0.058	0.057	0.057	0.049
Eu ₂ O ₃ % (Europium)	0.007	0.007	0.007	0.006
Gd ₂ O ₃ % (Gadolinium)	0.049	0.049	0.049	0.041
Tb ₄ O ₇ % (Terbium)	0.007	0.007	0.007	0.006
Dy ₂ O ₃ % (Dysprosium)	0.037	0.037	0.037	0.028
Hf ₂ O ₃ % (Holmium)	0.006	0.006	0.006	0.005
Er ₂ O ₃ % (Erbium)	0.016	0.016	0.016	0.011
Tm ₂ O ₃ % (Thulium)	0.002	0.002	0.002	0.002
Yb ₂ O ₃ % (Ytterbium)	0.013	0.012	0.013	0.009
Lu ₂ O ₃ % (Lutetium)	0.002	0.002	0.002	0.001
Y ₂ O ₃ % (Yttrium)	0.162	0.159	0.159	0.117

See notes from Table 1

The MRE uses a US\$366.40/t NMR cut-off and incorporates assumptions regarding commodity values, metallurgical recoveries and mining, processing, transportation and other relevant operating costs in evaluating reasonable prospects for economic extraction.

Bringing Nechalacho Forward from 2013

Nechalacho has been the subject of extensive exploration, metallurgical testing and technical evaluation over several decades. This work culminated in a DFS published in April 2013 under NI 43-101 and CIM standards, which established the technical and economic foundation for the Project at that time. Later that year, in August 2013, Avalon published an updated mineral resource estimate for Nechalacho, reporting 61.9 million tonnes of Measured and Indicated resources grading 1.64% TREO and 0.35% HREO, together with 58.2 million tonnes of Inferred resources grading 1.38% TREO and 0.26% HREO, using a US\$345 per tonne net metal-return cut-off.

The historical estimate and current MRE were prepared under different reporting standards, methodologies and economic assumptions and therefore should not be viewed as directly comparable. The significant increase in Inferred resources in the current MRE (130.6 million tonnes versus 58.2 million tonnes in 2013) principally reflects a new geological model, greater confidence in grade continuity and the inclusion of material from 2013 and 2014 drilling activity not previously included.

Overall, the updated MRE represents a significant modernization and revalidation of Nechalacho's resource and economic development potential under current assumptions. Rather than relying on historical resource estimates and assumptions developed more than a decade ago, Avalon now has a current S-K 1300 mineral resource estimate independently prepared by Micon that incorporates updated technical and economic parameters and the inclusion of material from 2013 and 2014 drilling activity. The updated estimate therefore provides a contemporary foundation from which Avalon can evaluate the optimal development configuration for Nechalacho and undertake the additional engineering, metallurgical and economic analysis required to determine the economics of a future mining operation. The updated MRE establishes a new current resource foundation for Nechalacho and supersedes the historical resource estimate for purposes of the Company's current mineral resource disclosure.

With the updated MRE completed, Avalon is advancing the next phase of technical and economic evaluation of Nechalacho. The Company is currently advancing a Preliminary Economic Analysis ("PEA") based on the updated resource, intended to evaluate a modern development configuration for the Project incorporating current technologies, processing alternatives and economic assumptions. Subject to the results of the PEA, Avalon expects to advance Nechalacho toward subsequent definitive feasibility-level work, including further metallurgical and process-development activities, including the establishment of a process demonstration unit.

Historical Mineral Reserves

The 2013 DFS included an estimate of mineral reserves prepared under the Canadian reporting standards applicable at that time. Those historical mineral reserves are not being treated as current mineral reserves under S-K 1300 and have therefore not been carried forward into the updated 2026 MRE.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. Accordingly, the current MRE should not be interpreted as a new feasibility study or as a current determination of the economic viability of a future mining operation. The updated MRE does, however, apply current economic parameters and reporting criteria in determining the material considered to have reasonable prospects for economic extraction and therefore provides an updated foundation for evaluating the Project's economic development potential.

Subject to subsequent feasibility-level studies, Avalon would evaluate the potential conversion of mineral

resources to mineral reserves under S-K 1300 and NI 43-101.

Qualified Persons and Technical Report

The S-K 1300 Technical Report for the updated 2026 Rare Earth Element Mineral Resource Estimate on Nechalacho was prepared by Tudorel Ciuculescu, P.Geo., and Richard Gowans, P.Eng., of Micon International Limited. Both Mr. Ciuculescu and Mr. Gowans are "Qualified Persons" as defined under Subpart 1300 of Regulation S-K and also as defined in NI 43-101.

The Technical Report has an effective date of July 14, 2026, and a report date of July 23, 2026. Mr. Ciuculescu conducted a site visit on June 25, 2026, and had previously visited the Project in 2011 and 2012.

The scientific and technical information related to the updated Mineral Resource Estimate in this news release has been reviewed and approved by Mr. Ciuculescu, P.Geo., who is independent of the Company.

The updated mineral resource estimate announced today establishes a current technical foundation for Nechalacho under Subpart 1300 of Regulation S-K. The Company is also working with Micon to complete an NI 43-101 technical report incorporating the same mineral resource estimate.

About Avalon Advanced Materials Inc.

Avalon Advanced Materials Inc. is a Canadian critical minerals company focused on advancing lithium and rare earth elements—two of the fastest-growing segments of the global energy transition. The Company is developing strategic assets to participate in high-growth markets and support the build-out of secure North American supply chains. Avalon is advancing the Nechalacho Rare Earth Elements Project in the Northwest Territories, which contains all light and heavy rare earth elements, as well as zirconium, tantalum, and niobium—critical minerals used in advanced technologies across the communications, defense, advanced technologies, and energy sectors. The Company is also focused on vertically integrating the Ontario lithium supply chain through the development of Lake Superior Lithium Inc., Ontario's first midstream lithium hydroxide processing facility, located in Thunder Bay. This facility is expected to serve as a cornerstone of North America's integrated battery materials supply chain, transforming northern Ontario lithium into essential inputs for transportation, grid storage, and advanced manufacturing.

For further information regarding Avalon Advanced Materials Inc., please visit www.avalonadvancedmaterials.com, email ir@avalonam.com, or call 416-364-4938.

Cautionary Statement Regarding Forward-Looking Information

This news release contains "forward-looking information" within the meaning of applicable Canadian securities legislation. 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 those risk factors discussed or referred to in the annual information form of the Company dated November 26, 2025 (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. 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.

Caution Regarding Mineral Resources: Mineral resources are not mineral reserves and do not have demonstrated economic viability. The MRE described herein incorporates assumptions used to assess reasonable prospects for economic extraction; however, the MRE does not constitute an economic analysis of the Project, establish mineral reserves or demonstrate that development of Nechalacho will be economically viable. Additional technical, metallurgical, engineering and economic studies will be required to determine the economic viability of any future mining operation.



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