



## Management's Discussion and Analysis of Financial Statements for the year ended August 31, 2018

This Management's Discussion and Analysis ("MDA") of Avalon Advanced Materials Inc. (the "Company" or "Avalon") is an analysis of the Company's financial results for the year ended August 31, 2018 (the "Year" or "Fiscal 2018"). The following information should be read in conjunction with the accompanying audited consolidated financial statements and the related notes thereto. This MDA is prepared as of November 28, 2018.

### Nature of Business and Overall Performance

Avalon is a Canadian mineral exploration and development company that is listed on the Toronto Stock Exchange in Canada, traded on the OTCQB Venture Market in the United States and also trades on the Frankfurt Stock Exchange in Germany. The Company seeks to build shareholder value by becoming a diversified sustainable producer and marketer of specialty metals and minerals and by expanding the markets for its mineral products.

Avalon operates primarily in Canada with a focus on the "Technology Metals" or "Cleantech Materials", including tin, lithium, tantalum, niobium, cesium, indium, gallium, germanium, rare earth elements ("REE"), yttrium, and zirconium.

The Company is in the process of exploring or developing four of its five mineral resource properties. The Company completed an updated preliminary economic assessment ("PEA") of its Separation Rapids Lithium Project in August, 2018. The Company completed a PEA for its East Kemptville Tin-Indium Project (the "East Kemptville Project") in July, 2018. Previously, the Company completed a feasibility study on its Nechalacho Rare Earths Elements Project (the "Nechalacho Project" or "Nechalacho") in April 2013 (the "Nechalacho FS"), and its Report of Environmental Assessment (the "Report of EA") was approved by the Minister of Aboriginal Affairs and Northern Development Canada ("AANDC") in November 2013. Nechalacho is the Company's most advanced development project and work on this project has been recently re-activated due to strong demand for the "magnet rare earths" neodymium and praseodymium.

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 ("CSR") best practices. In November 2018, the Company released its seventh comprehensive Sustainability Report entitled *Refocus, Revive and Restore* (the "2018 Sustainability Report").

The Company believes that industrial demand for the advanced materials products it seeks to produce, particularly lithium compounds, is growing rapidly due to their importance in an expanding array of applications in new clean technology, notably energy storage and electric vehicles.

### Selected Annual Information

The following selected financial data for each of the three most recently completed fiscal years are derived from the audited annual financial statements of the Company, which were prepared in accordance with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board ("IASB").

For the Years Ended August 31,	2018	2017	2016
	\$	\$	\$
Revenue (Interest)	61,777	28,211	35,160
Net Loss before discontinued operations	3,240,744	3,357,321	3,539,645
Net Loss before discontinued operations, per share basic and diluted	0.015	0.018	0.021
Net loss	3,240,744	3,357,321	3,539,645
Net loss, per share basic and diluted	0.015	0.018	0.021
Total assets	121,932,188	120,436,379	118,515,050
Total long term liabilities	3,768,171	3,264,433	263,600
Cash dividends	-	-	-

The Company has recorded losses in each of its three most recently completed fiscal years and expects to continue to record losses until such time as an economic mineral deposit is developed and brought into profitable commercial operation on one or more of the Company's properties, or is otherwise disposed of at a profit. Since the Company has no revenue from operations, annual operating losses typically represent the sum of business expenses, any impairment losses recognized on its mineral properties and adjustments to the fair value for the derivative liabilities and convertible redeemable preferred shares. The Company may increase or decrease its level of business activity in coming years and if it does, investors can anticipate that the Company's annual operating losses will also increase or decrease until an economic mining operation is brought into profitable commercial production, or one or more of the Company's properties are disposed of at a profit.

## Exploration and Development Activities

Expenditures on resource properties for Fiscal 2018 totalled \$2,272,883, a 15% decrease from the level of expenditures for the year ended August 31, 2017 ("Fiscal 2017") which totalled \$2,670,248. Of these expenditures, 65% were incurred on the Separation Rapids Lithium Project, 22% were incurred on its East Kemptville Project and 11% were incurred on the Nechalacho Project. Expenditures on the Separation Rapids Lithium Project decreased to \$1,487,340 from \$2,042,200 in Fiscal 2017 due to the significant expenditures incurred for the spring 2017 drilling program and higher expenditures on metallurgical process development work and environmental studies in Fiscal 2017. This decrease was partly offset by the costs related to the preparation of the updated PEA in 2018. Expenditures on the East Kemptville Project increased to \$505,102 from \$311,352 in Fiscal 2017, primarily related to costs incurred with respect to the preparation of the PEA. Expenditures on the Nechalacho Project increased to \$259,681 from \$198,342 in Fiscal 2017, reflecting the increasing activity on this project.

Resource property expenditures for the three months ended August 31, 2018 (the "Quarter") totalled \$525,976, a 3% decrease from the level of expenditures for the quarter ended August 31, 2017 (\$541,262) due to a lower level of exploration and development activity. Of these expenditures, 59% were incurred on the Separation Rapids Lithium Project, 30% were incurred on the East Kemptville Project, and 7% were incurred on the Nechalacho Project.

### *Separation Rapids Lithium Project*

During the Year, the Company incurred \$1,487,340 (2017 - \$2,042,200) in expenditures on the Separation Rapids Lithium Project, in the Paterson Lake area of Ontario. Approximately 60% was incurred on the diamond drilling program completed in the winter of 2018, updating the resource model to incorporate the assay results from the 2018 winter program as well as on the geological mapping and geochemical sampling program carried out during the Quarter on the Paterson Lake claims acquired in 2017. 18% was spent on additional metallurgical testwork toward optimization of

both the petalite and lepidolite flotation process flowsheets and the evaluation of fluidized bed roasting within the hydrometallurgical process flowsheet, 15% was incurred on completing the updated Preliminary Economic Assessment (“PEA”) based on a revised development model involving a staged approach beginning with production of a lithium industrial mineral product, while 7% was spent on on-going environmental studies and permitting.

During the Quarter, the Company incurred \$307,930 (2017 - \$351,077) in expenditures on the Separation Rapids Project. Approximately 52% was incurred on the summer geological mapping and geochemical sampling program and resource modelling. 36% was incurred on completing the updated PEA, and 12% was spent on on-going environmental studies and permitting.

### Updated PEA

During the Quarter, the Company completed an updated PEA for the Separation Rapids Lithium Project. The updated PEA reflects a simplified business model that focuses on initial production of lithium mineral concentrates, with potential for future expansion into production of the battery materials lithium carbonate and lithium hydroxide. This smaller scale development model reduces capital expenditure requirements substantially from the original model completed in September 2016, while generating attractive returns and reducing overall business risk. The updated PEA has been prepared by independent consultant Micon International Limited under the direction of David Marsh, SVP, Metallurgy and Technology Development and was filed on SEDAR ([www.sedar.com](http://www.sedar.com)) subsequent to the Quarter and is available on the Company’s website (<http://avalonadvancedmaterials.com/resources/reports/AVL-SeparationRapids-PEA2018.pdf>).

The updated PEA model utilizes a plant throughput rate of 475,000 tonnes per annum (“tpa”) compared to the 950,000 tpa rate used in the 2016 PEA. This will result in a 20 year operating life, based on the present known mineral resources, with annual production of 71,500 tonnes of petalite concentrate; 11,800 tonnes of lepidolite concentrate (both for 18.5 years); and, commencing in Year 6, 100,000 tonnes of feldspar (through to Year 20). The upfront capital expenditure requirement is C\$77.7 million with a further C\$13.7 million planned for the feldspar circuit in Years 5/6 (or once payback of the initial capital is complete). Average annual revenue is estimated at C\$90 million versus average annual costs of C\$60 million, resulting in a pre-tax Net Present Value (“NPV”) (at 8% discount rate) of C\$156 million and a pre-tax Internal Rate of Return (“IRR”) of 27.1%. The post-tax NPV is calculated at C\$102 million and the IRR at 22.7%.

While much of the new demand and long term growth prospects for lithium supply are centred on the rechargeable battery industry, lithium remains a critical ingredient in many other applications such as glass and ceramics, which now must compete for supply with battery makers. Petalite is ideally suited in many of these applications as an industrial mineral due to its high purity and unique crystal structure. Petalite is the primary lithium mineral at Separation Rapids and the results of recent process testwork, disclosed in the Company’s news release dated November 16, 2017, demonstrated that a high purity petalite product can be produced from the Separation Rapids resource. This product, called “Super Petalite,” has attracted considerable interest from consumers in the glass and ceramics industry, leading to the conclusion that petalite concentrates should be the initial focus of production from Separation Rapids. Discussions toward concluding off-take agreements with major consumers of this product in the glass industry are now at an advanced stage.

Petalite production will be supplemented with the production of a second lithium mineral concentrate: lepidolite. Lepidolite is a lithium mineral which is in growing demand for conversion to lithium carbonate. Avalon already has a preliminary off-take agreement in place with Lepidico Ltd., of Perth, Australia (ASX:LPD, “Lepidico”). Lepidico is currently planning to develop a lithium carbonate demonstration production facility in Sudbury, Ontario.

Avalon’s 2016 PEA presented a model focused on the conversion of petalite concentrate into lithium hydroxide for the battery and energy storage industries. This remains an opportunity for a future expansion of the operation as additional mineral resources are delineated. Development into these markets would start with the addition of a pilot scale lithium hydroxide production circuit at the mine

site to produce trial quantities of the battery material product and prove the innovative, new process flowsheet developed by the Company in 2016. This process offers a number of advantages over the traditional flowsheet, mainly through lower chemical consumption and less waste products for disposal.

In accordance with the regulations under NI 43-101, it is noted that the PEA must be considered preliminary in nature, as it includes Inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.

### **Snowbank Lithium Pegmatite Discovery**

During the Quarter, the Company discovered a new lithium pegmatite on the Separation Rapids Lithium Property. The new discovery, named the Snowbank Pegmatite, occurs on the 100% owned Paterson Lake claims acquired by Avalon in 2017, approximately four kilometres northwest of the main Separation Rapids lithium deposit. It was discovered in a large outcrop area traceable for over 100 metres along strike (open under overburden at both ends) averaging 6 metres wide. Like the main deposit, the lithium occurs primarily in the ore mineral petalite, which occurs as large crystals up to 15 centimetres in diameter. Individual channel samples have yielded assays of up to 2.51% Li<sub>2</sub>O over 1.1 metres, indicating that petalite comprises approximately 50% of the mineral content in the rock sampled.

The Snowbank Pegmatite was discovered in the course of a summer geological mapping and geochemical sampling program on the Paterson Lake claims, following up on other known petalite pegmatite occurrences in the area. The new discovery illustrates how challenging even coarse grained petalite can be to recognize in the field (due to its similar appearance to common feldspar) and how much potential there may be for more discoveries in the Separation Rapids area to extend the life and production capacity for the new operation planned for the main deposit. Next steps will include a first phase drilling program tentatively planned for 2019.

Following the discovery, a preliminary channel sampling program was carried out, focused on the petalite mineralized areas (the results are compiled in the Company's News Release of [September 4<sup>th</sup>, 2018](#)). The main Snowbank Pegmatite zone is up to 9 metres wide, but pinches and swells with some sections bifurcating into two to three smaller parallel dykes from 1 to 3 metres in width, for a combined average width of 6 metres, over the 100 metre long exposure. Individual dykes exhibit classic pegmatite zoning features, with an internal assemblage of coarse petalite, potassium feldspar, albite and quartz, flanked by narrow albitic border and wall zones. Three channel samples collected from the petalite mineralized sections of the main Snowbank Pegmatite zone average 1.40% Li<sub>2</sub>O, while three other parallel dykes, also sampled, locally host similar mineralization over narrower widths.

Highlights include lithium values of 1.53% Li<sub>2</sub>O over 2.6 metres; 1.61% Li<sub>2</sub>O over 2.3 metres; and 1.07% Li<sub>2</sub>O over 2.9 metres - comprising six out of 11 analysed samples. The channel samples are all close to right angles to the strike of the pegmatite and thus approximate true widths. The values can be compared with the 0.6% Li<sub>2</sub>O cutoff grade and 1.4% Li<sub>2</sub>O resource grade at the main Separation Rapids lithium pegmatite deposit. The three channels are distributed over a strike length of just over 30 metres, with spacing averaging about 10 metres, in one discrete pegmatite dyke. Visible petalite is exposed continuously for about 100 metres. Sampling methods and analysis details are included as footnotes to the table below.

Avalon's Paterson Lake claims, contiguous with the claims and mining lease hosting the Separation Rapids lithium deposit, host three previously-known pegmatite occurrences: the Glitter, Wolf and Rattler (of which the Glitter is known to contain petalite). These occurrences fall within the same geological structure that hosts Avalon's main Separation Rapids deposit. The new Snowbank Pegmatite is located two kilometres southeast of the Glitter and four kilometres northwest of Separation Rapids, with potential for more petalite pegmatite discoveries along this minimum six kilometre trend.

The next steps for advancing Avalon's knowledge of the Snowbank Pegmatite, along with the nearby Glitter, Wolf and Rattler pegmatite occurrences, are further rock sampling, possibly accompanied by trenching, and finally drilling. Avalon now has multiple drill targets on the western part of the property that would be most easily accessed in winter.

### **Metallurgical Process Testwork**

The new petalite flotation process developed by Avalon in late 2017, that successfully produced a high grade petalite concentrate (4.5%  $\text{Li}_2\text{O}$ ) with greatly reduced levels of sodium and potassium, has attracted considerable interest from potential customers as there is no comparable product available in the market today. This high purity petalite concentrate (which the Company has branded as "Super Petalite") will be a premium quality material for certain specialty glass applications. The updated PEA has incorporated this flowsheet and product in the business model. Further optimization of the process will be carried out during a final pilot plant program, when feasibility study work commences.

### **Lithium Markets**

The demand for lithium chemicals, such as lithium carbonate and lithium hydroxide, has been growing rapidly in recent years, driven predominantly by lithium ion rechargeable battery technology now in high demand for electric vehicles and other energy storage applications. Current projections indicate continued growth in lithium demand from the battery sector for the foreseeable future. Because lithium is marketed in different forms, (including lithium minerals used in glass and ceramics) aggregate lithium demand and supply is usually expressed in terms of lithium carbonate equivalent ("LCE").

Industry analysts continue to debate the near-term rate of growth in lithium demand versus supply. While new production is forecast, there is considerable uncertainty as to how rapidly this new supply will be brought on-line. It is clear that many new lithium supply sources will be needed to ultimately meet the rapidly growing demand for batteries for electric vehicles. The Separation Rapids Lithium Project will be well-situated to serve new battery production facilities contemplated in North America. However, the mineralogy of the Separation Rapids resource allows for flexibility in the lithium products that can be produced, with petalite having considerable demand as an industrial mineral in specialty glass applications. This offers a simpler, lower risk and lower cost development alternative that was the focus of the updated PEA.

For the purposes of its 2016 PEA, Avalon used a price assumption of US\$11,000 per tonne FOB plant for lithium hydroxide consistent with price forecasts developed in mid 2016 by Roskill Information Services. In the October 2018 Review, Benchmark Minerals Intelligence stated that the current price (FOB North America) for lithium hydroxide was US\$17,000/tonne, a 55% increase since 2016. Prices in China have fallen in Q2-Q3 2018 and are now more in line with prices in the rest of the world, averaging US\$13,575/tonne for carbonate. While spodumene concentrate prices (6%  $\text{Li}_2\text{O}$ , FOB Australia) had strengthened to US\$915/tonne, they have recently fallen just below the US\$900 level. Though petalite prices are not reported, petalite concentrate prices with an average 4.5%  $\text{Li}_2\text{O}$  content (compared with spodumene concentrates at 6%) could attract a price of US\$650/tonne, based purely on lithium content.

Lithium chemicals are getting most of the attention in the market and the media due to the increased demand projected for lithium ion batteries in electric vehicles. The markets for lithium in high strength glass products are also expected to grow. Many existing and new high strength glass formulations for automotive, aircraft, cell phones, and video displays where durability and light weight are key, require lithium to achieve the desired properties. Avalon's new "Super Petalite" product is well-suited for this market.

Numerous expressions of interest have been received from potential customers for the Company's lithium industrial mineral products and discussions on off-take commitments are ongoing. These have helped to define the probable market size for the petalite product, allowing the Company to finalize an appropriate production capacity for the Phase 1 plant for the purposes of the updated

PEA. With demand for lithium growing rapidly and few advanced lithium projects ready to commence production, the Company is well-positioned to bring a new supply to the market to serve priority customers, once project financing is in place.

### **Environmental Assessment and Community Engagement Update**

Avalon is committed to developing the Separation Rapids Project based on modern CSR principles and reporting on its performance in its annual Sustainability Reports. These CSR principles include commitments to minimize environmental impacts, ensuring the health and safety of employees, creating benefits for local communities and providing full transparency in its social and environmental performance. The Company and the project are well known in the local community.

The Company completed site water, sediment, fish, invertebrate and endangered species studies in June, 2017 and October, 2017 that successfully advanced the validation of the 1999 environmental baseline study. Initial leachate work has validated that any rock mined is not acid generating, and additional work on neutralized tailings is ongoing. The original baseline environmental study prepared in 1999 and updated in 2007, required the spring and fall 2017 and summer 2018 data collection to further update this study and align it with recent regulatory changes. A Draft Project Description and Environmental Impact Assessment was produced in 2017. Additional assessment work for the new Tailing Management Area was completed to accommodate the updated PEA. Recent project modifications will not significantly change environmental designs.

Permitting has been advanced through a multi-ministry meeting to review the completed Draft Project Description, discuss the provincial permitting process and to obtain regulator input into the project planning and confirm the proposed environmental work program. Separate discussions were held with federal regulators which also included the probable exemption of the project from the Canadian Environmental Assessment Act 2012 (“CEAA”) due to the low environmental impact of the project and the fact that the project does not exceed any of the regulated triggers under the Act. Avalon is carefully monitoring the developments of the Environmental Assessment Act that could soon replace CEAA. No serious concerns have been identified. Similarly, the new Federal Metal and Diamond Mines Effluent Regulation, replacing the Metal Mining Effluent Regulation, will not negatively impact the project. Ongoing engagement is planned to coincide with the approvals process to review the simpler and lower impact business model of the recent PEA.

The Project is located in the traditional land use area of the Wabaseemoong Independent Nations (“WIN”) for which they have stewardship under an agreement with the Province. The Company first signed an MOU with WIN in 1999 which was renewed when the Project was re-activated in 2013. Avalon management has been keeping WIN leadership informed on Project activities and remains committed to fulfilling its community consultation obligations and partnering with WIN on business opportunities and providing training for community members. The Company has also initiated dialogue with the Métis Nation of Ontario which holds Aboriginal rights in the area. Following the completion of the Draft Project Description, positive project review meetings were held with the Wabaseemoong Chief and Council and with the Métis Nation of Ontario at a Valued Components Workshop in order to review the project and obtain guidance and comments on environmental aspects of the project. The staged development approach is also advantageous to Avalon’s potential Indigenous partners by providing time to consider opportunities for direct participation in project development and time for individual members to obtain the necessary training for jobs at the site. Engagement is ongoing with local Indigenous communities, regulators, and local government who continue to be supportive of the project.

The development model designed for the PEA results in a smaller environmental footprint, including low GHG emissions and almost non-existent air emissions. There are no anticipated environmental impacts of concern at the project, with the mineral deposit and waste rock being non-toxic and non-acid generating and minimal water discharge being anticipated. Avalon will continue to update and validate its 2007 environmental baseline study and the tailing management system design in the context of the new development model. Avalon is currently working with Hydro One to determine the optimal route to deliver clean hydro-electric power to the site from one of the nearby dams on the English River. The Company is already studying the potential for beneficial new uses of the site as

part of its closure strategy, including re-purposing the waste areas for agricultural use such as wild rice habitat.

The Company will formally start the permitting process, once sufficient engineering data and project financing are in place. Overall, the Company does not anticipate any delays in securing the necessary permits and approvals to proceed with the production facility proposed in the 2018 PEA.

### **Future Work**

The next step in the Project's development is to proceed with a short pilot program to finalize reagent recycling and water treatment processes, after which a bankable feasibility study will be completed. This work is expected to proceed later in 2019 after off-take agreements are concluded and additional project financing is in place. Some additional drilling is contemplated to bring more of the Inferred resources into the Measured and Indicated categories. In addition, Avalon continues to explore for new lithium pegmatites, particularly on the western extension of the property, where a number of new petalite occurrences have been identified, but never previously drilled, including the Glitter pegmatite. A detailed mapping and sampling program on the western extension area is currently in progress.

Unless otherwise noted, the technical information on the Separation Rapids Lithium Project has been reviewed and approved by the Company's Senior Vice President, Metallurgy and Technology Development, Mr. David Marsh, FAusIMM (CP), or Dr. William Mercer, PhD, P.Geo. (Ontario), P. Geo. (NS), Vice President, Exploration, who are both Qualified Persons under NI 43-101.

### **Nechalacho Rare Earth Elements Project**

The Nechalacho Project is located at Thor Lake in the Mackenzie Mining District of the Northwest Territories ("NWT"), about 5 kilometres north of the Hearne Channel of Great Slave Lake and approximately 100 kilometres southeast of the city of Yellowknife. The property is comprised of five contiguous mining leases totalling 10,449 acres (4,249 hectares) and three claims totalling 4,597 acres (1,869 hectares). The leases are subject to one independently owned 2.5% Net Smelter Returns ("NSR") royalty agreement. Avalon has the contractual right to buy out this royalty on the basis of a fixed formula, which is currently approximately \$1.5 million and which will increase at a rate equal to the Canadian prime rate until the royalty is bought out.

The property is situated in an area referred to as the Akaitcho Territory, an area which is subject to comprehensive native land claim negotiations between the Government of Canada and the Treaty 8 Tribal Corporation, which consists of the Yellowknives Dene First Nation ("YKDFN"), the Deninu K'ue First Nation ("DKFN") and the Lutsel K'e Dene First Nation ("LKDFN"). The Company has signed an Accommodation Agreement with the DKFN. The Company also recognizes that the Tłı̄cho First Nation ("TFN") has a settled land claim with the Government of Canada which provides for certain harvesting rights in the area of the Nechalacho site. The general area around the Nechalacho site is subject to Aboriginal rights asserted by two Métis organizations: the Northwest Territory Métis Nation ("NWTMN") and the North Slave Métis Alliance ("NSMA"). During 2014, Avalon concluded a Participation Agreement with the NWTMN and commenced discussions with the NSMA.

While the Nechalacho Project has been relatively inactive since 2014, the Company continues to monitor REE markets closely and there have been some recent indications of renewed demand. The anticipated increase in demand for electric vehicles (EVs) in the coming years, and the need for rare earth magnets in the electric motors for these vehicles sparked a significant increase in price for neodymium (Nd) and praseodymium (Pr) through three quarters of 2017. In Q4 2017 prices retreated when China released some stockpiled material into the market, however, the rapid transition to electric vehicles we are witnessing bodes well for future growth in demand for Nd and Pr. The renewed demand for Nd-Pr motivated Avalon to re-activate the Project in 2018, to look specifically at Nd-Pr potential in the near-surface T-Zone and Tardiff Zones.

The key factors going forward which influence the Nechalacho Project schedule, all of which are somewhat dependent on one another, are: securing one or more strategic or financial partners; securing sufficient binding agreements for offtake to support project financing; the availability of equity and debt financing at a reasonable cost and the receipt of all requisite construction and operating permits.

Expenditures during the Year totalled \$259,681 (2017 - \$198,341), of which approximately \$211,000 were spent on camp maintenance, lease survey program and preparation for the field program conducted in September 2018, with the balance spent primarily on mining lease payments and renewing the exploration land use permit with the positive associated engagement activities. The lease survey will enable Avalon to finalize conversion of the mineral claims adjacent to the present leases, to mining lease status.

Expenditures during the Quarter totalled \$38,161 (2017 - \$81,698), which were spent primarily on mining lease application, preparation for the field program that was conducted in September 2018 and renewing the exploration land use permit.

### **Rare Earth Markets**

Interest in rare earth projects outside China (including Avalon's) has resurfaced recently following the US National Defense Authorization Act banning the purchase of rare earths and rare earth magnets from China for the US Department of Defense. Furthermore the ongoing US trade dispute with China has created additional risk for supply chain disruptions of these critical elements.

Rare earth magnets remain vital to many clean technology applications requiring high efficiency, lightweight electric motors and generators. This includes motors for electric vehicles, which can require 5-10kg of rare earth magnets per vehicle. The growing market for electric vehicles, especially in China, has created new demand for these high strength magnets, resulting in rising prices for neodymium (US\$47/kg FOB China in early October 2018 according to Asian Metal) and praseodymium (US\$59/kg FOB China according to Asian Metal). The world still largely relies on China for rare earth supply, yet China reportedly may soon become an importer of neodymium concentrates.

### **Neodymium Potential**

Previous work on the Project has identified high-grade, near-surface neodymium mineralization associated with the light rare earth ore mineral bastnaesite in both the North T and Tardiff Zones. The former was extensively explored by previous owners of the property in 1982-85 and the Nechalacho Basal Zone Deposit was extensively drilled by Avalon in 2007-12. However, there was little systematic analytical work for rare earths during the early exploration in the 1980's in the area of the T-Zone.

In 2007, Avalon reported on historical resources in the North T Deposit which included a small, but high grade, neodymium resource in the F-Subzone, averaging 6.5% Total Rare Earth Oxides ("TREO") including 1.5% Nd<sub>2</sub>O<sub>3</sub>. A decline was driven by previous operators into the North T Deposit to conduct underground exploration and recover a bulk sample. The decline also intersected the near-surface neodymium-rich F-Subzone closer to surface, making it readily accessible for additional bulk sample work, once it is partially de-watered.

### **Lithium Potential**

Nechalacho is a polymetallic property with, in addition to rare earths, significant quantities of other rare metals including beryllium, niobium, tantalum and lithium. Lithium occurs in the mineral polyolithionite, which is similar to lepidolite, in the S and T Zones. The resources of lithium at Nechalacho have never been estimated and Avalon intends to complete sampling of historic drill core in Fall 2018 to establish the distribution of this element in the T deposit. This is anticipated to enable estimation of a T Zone lithium resource. Historic mineral analyses of the polyolithionite at the

project have shown over 6% Li<sub>2</sub>O. The S Zone, which has coarse polyolithionite mineralization in outcrop, has never been drilled.

## Development and Permitting Plans

Avalon plans to investigate the possibility of developing Nechalacho as a near-term, small-scale producer of Nd-Pr rich concentrates for export involving potentially a simple mining, crushing and ore-sorting operation. This has significant advantages over the already-approved Basal Zone Project development plan from an environmental standpoint. The barren waste rock generated from the ore-sorting process (being benign) would negate the need for the originally proposed aggregate quarry for site development and the proposed airstrip extension.

The Company is currently participating in an independent scoping study, supported in part by the Territorial Government, on the East Arm-Yellowknife Road and hydro infrastructure corridor in order to provide clean power, year-round access to site and greatly simplified Project logistics. It would also provide significant cost savings to Nechalacho and northern communities such as Lutsel K'e through improved access. This is driven in part by Federal government initiatives to reduce greenhouse gas emissions that would result from replacing diesel power with clean hydro power.

Specific Company objectives for 2018/2019 include:

- confirming Nd-Pr resources in the F-Subzone and Tardiff Zones and preparing a scoping study on a small-scale development model focused on Nd-Pr concentrate production;
- re-sampling existing drill core from 1980's drilling to analyze for lithium and establishing an initial T-Zone lithium resource estimate;
- investigating neodymium, praseodymium, dysprosium (the other 'magnet rare earth') and lithium potential in the North T and S zone deposits;
- metallurgical testing (ore sorting) of near surface rare earth mineralization with high neodymium and praseodymium values, and
- continuing the permitting process and community engagement toward identifying local Indigenous business partners.

During the Quarter Avalon successfully renewed its Land Use Permit, including the extension of the existing airstrip, and completed the perimeter survey of several contiguous mineral claims in order to bring them to lease. The lease application has been submitted and approved. Avalon completed a field program in September to conduct additional sampling in the area of the T-Zone and Tardiff Lakes Zones to begin assessing their potential as sources of neodymium and praseodymium ("Nd-Pr") rich concentrates currently in high demand for magnet applications. Sampling was also done in the T-Zone to begin assessing the resource potential of widespread lithium mineralization occurring as the lithium mica polyolithionite.

The recent field program resulted in 41 drill core and rock samples and 80 biogeochemistry samples being shipped for analysis for rare earths and lithium. The rare earths in the high-grade sections of the North T-Zone are contained largely in the ore mineral bastnaesite, which has a relatively high rare earth content of around 24%, and may be easily concentrated by ore-sorting methods. Additional samples of the bastnaesite mineralization were collected for initial ore-sorting process testwork contemplated for this fall. Avalon plans to investigate the possibility of developing Nechalacho as a near-term, small-scale producer of Nd-Pr rich concentrates for export, potentially involving a low-cost mining, crushing and ore-sorting operation.

The South T-Zone is also known to contain lithium and rare earth mineralization, although the original exploration drilling in the 1980's was focused on beryllium and no formal resource estimate was established for rare earths or lithium. Once the assays are received for the core samples from the North and South T-Zones, Avalon intends to update the resource estimate for rare earths and develop a new resource model for lithium in these two deposits.

Previous work by Avalon at Nechalacho focused on the heavy rare earth-rich Basal Zone deposit, which was the subject of the Company's 2013 Feasibility Study. In the course of drilling the Basal Zone, very high grade Nd-Pr mineralization in bastnaesite was intersected near surface in the

Tardiff Lakes area, with grades of up to 10.78% total rare earth oxides over 11 metres being intersected. To better map the extent of the near-surface Tardiff Lakes mineralization, which is largely overburden covered, the field crew collected 80 biogeochemistry samples to test this method for outlining near-surface rare earth mineralization: a method which has proven to be very effective in recent exploration for lithium on the Company's Separation Rapids property in northwestern Ontario.

Unless otherwise noted, the technical information on the Nechalacho Project has been reviewed and approved either by the Company's Senior Vice President Metallurgy and Technology Development, Mr. David Marsh, FAusIMM (CP), or Dr. William Mercer, PhD, P.Geo. (Ontario), P. Geo. (NWT), Vice President, Exploration, who are both Qualified Persons under NI 43-101.

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

The Company incurred \$505,102 (2017 - \$311,352) in expenditures during the Year on the East Kemptville Project, approximately 42% of the expenditures were incurred on the preparation of a Preliminary Economic Assessment report (the "EK PEA"), including an updated resource estimate, to evaluate the economics of a small-scale re-development and site rehabilitation scenario using different variants on the model, 21% was spent on environmental studies and permitting, and 23% on resource modelling of the stockpile. The balance of the expenditures was incurred for metallurgical testwork to evaluate the use of new ore-sorting technology to reject waste and create a higher grade of feed material for a smaller (lower cost) gravity concentrator.

The Company incurred \$159,125 (2017 - \$103,211) in expenditures during the Quarter on the East Kemptville Project, approximately 47% of the expenditures were incurred on the preparation the EK PEA, 34% was spent on environmental studies and permitting, with the balance incurred primarily on resource modelling of the stockpile.

The Company presently holds mineral rights at East Kemptville through a "Special Licence", a form of mineral tenure granted by the Province of Nova Scotia in circumstances where there is a history of previous industrial land use activity (such as mining) in the area of interest. It does not immediately convey surface land rights and, accordingly, access must be arranged with the permission of surface rights holders.

The Company first acquired its Special Licence at East Kemptville in 2005 and it has been subsequently renewed multiple times while the Company negotiated access to the site. During the Quarter, the Special Licence was renewed while the Company continues the process toward applying for a mining lease to replace the Special Licence and secure full surface tenure. The lease application will be formally submitted in late 2018. Once received, the Mining Lease will allow Avalon to proceed with final feasibility study work and Project financing. The Company is presently preparing the EK PEA for filing with the mineral lease application along with a site closure plan. The results of the EK PEA were announced in mid-July, 2018. Once all approvals are in place, financing is secured and feasibility work completed, the operation could be brought to initial production in 12-16 months.

During the Quarter, Avalon completed and SEDAR-filed the final EK PEA. Avalon also held key meetings with Ministry of Energy and Mines (formerly Ministry of Natural Resources) and Ministry of Environment officials in Yarmouth, toward achieving an efficient permitting and approvals process for the Project. The re-development model, as presently conceived, is an environmental remediation project that will be financed through the sale of tin concentrates recovered in large part from previously-mined mineralized material stockpiled on the site.

From Day 1 of operations, Avalon's model provides for a reduction in the long term environmental liability and eventual full rehabilitation of this brownfield site. Due to this, it is anticipated that the permitting and approvals process will be shorter than for a typical greenfield mine development. There is strong community support for the Project, as well as from local politicians, First Nations and environmental NGOs. Avalon is also in discussions with local stakeholders towards collaboration on future opportunities including, among others, a long-term vision for turning the rehabilitated site into a solar power generation facility or other beneficial reuse such as agriculture.

## **Preliminary Economic Assessment**

The EK PEA on the current small-scale re-development and site rehabilitation concept has been prepared by independent consultants Micon International Limited, Toronto, ON. It will be filed with the Province of Nova Scotia as part of the Company's application for a mineral lease and is [available on the Company's website](#). Further work to optimize the development model, including the potential implementation of new ore-sorting technology, is ongoing.

The finalized mine plan is based on the updated mineral resource estimate disclosed in the Company's new release dated June 28, 2018. The redevelopment model primarily involves processing of the 5.87 million tonne stockpile of previously-mined oxidized low-grade mineralization, supplemented by selective mining of near-surface fresh higher-grade tin mineralization the Main and Baby Zone deposits.

The freshly mined tin mineralization will serve an important purpose in the site rehabilitation concept by allowing for the generation of clean tailings free of sulphide minerals. These clean tailings will be used to create a cover for the existing dry-stacked tailings, which will fully remediate the long term environmental liability associated with the tailings and facilitate its ultimate conversion into other long term beneficial uses, such as a solar power generation or agriculture. Avalon's small-scale, re-development model utilizes existing infrastructure, tailing management facility and previously-mined material, making the Project a conflict free, low energy, low green-house gas producer that may also make the final product more attractive to Avalon's cleantech customers.

The development model utilized for the EK PEA contemplates a production schedule of approximately 1,300 tonnes per annum of a 55% tin concentrate for 19 years, with tin concentrates being sold and shipped for treatment in international markets. The EK PEA concludes that the small-scale re-development model for tin concentrate production at East Kemptville is economically viable at current tin prices in the range of US\$20,000 to US\$22,000/tonne. Assuming an average go-forward tin price of US\$21,038/tonne (as forecast by the World Bank Commodity Price outlook for 2020), and an exchange rate of CAD\$1.30/USD, the Project has an indicated pre-tax IRR of 15.0% and an NPV of C\$17.9 million at an 8% discount rate. The initial capital cost is estimated at C\$31.5 million. Average annual revenues from sales are calculated as C\$17.75 million vs. annual production costs of C\$11.6 million. LME Tin prices are currently US\$19,100 and have averaged US\$20,228 year-to-date. Tin prices have come off along with a general decline in metal prices since mid-June linked to the U.S./China trade war.

## **Project Financing Plans**

The East Kemptville Project has attracted strong interest from a number of potential financial partners, including equipment manufacturers interested in supplying the modular gravity plant and the ore-sorting technology, as well as others that have expressed interest in securing off-take of the tin concentrates (which are in short supply from non-conflict sources). Other parties have expressed interest in equity participation based on the site rehabilitation concept and the compelling precedent that it will set for how closed mine sites, now treated as perpetual liabilities, can be profitably rehabilitated through application of new and innovative process technologies and remediation strategies.

In accordance with the regulations under NI 43-101, it is noted that the EK PEA must be considered preliminary in nature, as it includes Inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the EK PEA will be realized.

## **Permitting and Environmental Studies**

Environmental studies have examined the nature of the waste material generated from renewed operations, as well as the conditions required for bringing the existing operation into readiness for future production. A closure strategy has now been prepared for the small-scale re-development scenario to significantly reduce the existing site environmental liability through innovative

management of future waste rock and tailings and through the processing and elimination of sulphide-bearing material presently stored on surface that is contributing to the need for costly ongoing water treatment. Metallurgical testwork to validate the ability to produce a clean (low sulfur) low permeability cover to prevent the release of further acid mine drainage from the existing tailings management area was successfully completed. This low permeability cover has the additional benefit of lowering the water table in the tailing management area, further improving the long term stability of this facility.

All future potentially acid generating waste produced will be disposed of sub-aqueously to eliminate oxidation and the need for long term treatment requirements. These are anticipated to significantly reduce or eliminate the need for ongoing site care and maintenance post closure. Additional drilling was completed by the surface rights owner to validate the stability of the coarse tailings pile and eliminate the potential need for future stabilization work during operations. The detailed due diligence review of the historic environmental liability, led by Mark Wiseman, Vice-President, Sustainability, related to the acquisition of the surface rights was completed with no fatal flaws identified.

During the Quarter, the Species at Risk Act study was completed at the Project site. Engagement continues by meeting with regulators, NGOs and local communities with continued strong support for the Project. With the update of the mine plan, permitting is well advanced with the mineral lease and Crown Land lease transfer planned for submission by the end of November, 2018. The closure plan was updated to incorporate changes to the mine plan. The overall objective of full site rehabilitation on closure has been validated in the EK PEA and is a key objective for Avalon.

### **Project Development Update**

Avalon received positive results from an ore-sorting testwork program conducted on samples of tin mineralization from the East Kemptville Project. As discussed in the Company's news release dated [September 17, 2018](#), these results provide further encouragement that ore-sorting technology can be successfully implemented at East Kemptville to reduce both capital and operating costs and to reduce the volume of tailings generated from the proposed operation.

Sensor-based ore-sorting ("SBS") is an emerging technology seeing increasing application in the mining industry. It involves the scanning of individual rock particles on a conveyor using various types of available sensor technologies. Depending on the chemical, mineralogical or physical characteristics, the particles of value are individually identified and separated from the "rejects" by applying either a mechanical, hydraulic or, in the case of East Kemptville, a pneumatic process.

The successful application of an ore-sorting process offers a number of potential benefits through the rejection of low or non-mineralized waste rock before it is fed into the processing plant. This can lead to a significant reduction in the size of the plant, along with attendant reductions in both capital and operating costs. It may also allow for the economic processing of low grade feed materials that would otherwise be un-economic to treat and the associated overall higher density waste products increases the capacity of waste management areas.

The recent work was conducted by Cronimet Mining Processing SA (Pty) Ltd ("CMPSA"), who are providing technical and metallurgical services to Avalon in relation to the East Kemptville Project. CMPSA has also expressed interest in partnering with Avalon on the development of the Project.

Drill core samples from the in-ground resources at East Kemptville were delivered in July 2018 to a test facility in Kentucky, USA in order to determine the amenability of East Kemptville tin mineralization for beneficiation utilizing sorting technology. Samples varying from relatively high-grade to low-grade tin concentrations were scanned using a multisensory sorter platform. Based on these scans an algorithm was developed to allow for the separation of the material during the test campaign.

The feed stock used during the test campaign contained 0.11% Sn, 0.06% Cu and 0.11% Zn. The first step of the testwork produced an upgraded product containing 0.47% Sn and a product mass yield of 12%. Recovery versus grade data also showed that SBS can be used to recover the zinc

ore mineral sphalerite (which also contains indium) from this resource. The zinc-indium feed was successfully upgraded to 0.23% Zn in the first step, while copper content remained low.

Similar positive results were achieved in a preliminary ore sorting test program conducted in 2017 using material from the low grade stockpile, confirming that SBS can be successfully employed to upgrade both the in-ground tin resource as well as the stockpiled material.

### **Next Steps**

Based on these results, CMPSA has recommend that a detailed sampling campaign be conducted on the low grade stockpile, followed by an extensive bulk testwork program using a pilot scale ore sorting plant to test the recovery of valuable minerals on a pilot scale. CMPSA visited the East Kemptville site in September, 2018 to meet with Avalon and site representatives in order to design and schedule the sampling program which is likely to involve the extraction of a bulk (~10 tonne) composite sample tentatively scheduled for December 2018. The test program, including writing of the technical report, is expected to take five to six months to complete. This testwork, combined with a confirmation drilling program on the stockpile, will be utilized to finalize the small-scale site re-development model to the Feasibility level of confidence, following which it is contemplated Avalon and Cronimet would enter into a partnership for the joint development of the project. In addition to the Mining Lease and Crown Land Lease transfer, work will be initiated on the Industrial Approval.

Unless otherwise noted, the technical information on the East Kemptville Tin-Indium Project has been reviewed and approved either by the Company's Senior Vice President Metallurgy and Technology Development, Mr. David Marsh, FAusIMM (CP), or Dr. William Mercer, PhD, P.Geo. (Ontario), P. Geo. (NS), Vice President, Exploration, who are both Qualified Persons under NI 43-101.

### ***Lilypad Cesium Project***

The Lilypad Cesium Project consists of 166 new claim units, totalling slightly over 3,200 ha, covering a field of lithium, tantalum and cesium mineralized pegmatites, and located 150 kilometres northeast of Pickle Lake, Ontario. The claims were staked by the Company between January 1999 and October 2000 and are 100% owned by the Company with no underlying royalties. Previous owners of the property drilled some 50 shallow drill holes and Avalon completed 32 drill holes totaling 4,781 metres in 2000 and 2001 in a program focused primarily on tantalum potential that produced encouraging initial results.

The project has been inactive since 2002 awaiting a recovery in tantalum prices or new demand for cesium minerals. Two recent developments have encouraged Avalon to resume exploration at the property. Firstly, because of recent increasing market interest in both lithium and cesium, a field program is justified primarily to further investigate the cesium potential of the property due to a global supply shortage. Secondly, development plans for the Ring of Fire area, north of the property, increase the probability of new road access being developed into the area in the near future.

Renewed exploration work now planned for summer 2019 will comprise geological mapping and geochemical sampling to better understand cesium distribution, identify new drill targets and to obtain samples suitable for metallurgical testwork. The 2000 and 2001 work program recognized exceptional cesium potential over a broad area on the property with drill intercepts assaying up to 6.205% Cs<sub>2</sub>O over 1.70 metres in one mineralized dyke known as the Pollucite Dyke.

The Project is located in the traditional territory of the Eabametoong First Nation. The Company has initiated discussions with community members.

### ***Other Projects***

The Company did not complete any work on any of its other projects during the Year.

## Corporate Social Responsibility

In November 2018, the Company released its 2018 Sustainability Report, which is available for download on the Company's website at: <http://www.avalonAM.com>

The 2018 Sustainability Report was prepared in accordance with the streamlined October 2016 Global Reporting Standards. The 2018 Sustainability Report incorporates a self-assessment of Fiscal 2018 performance and sets targets for 2019 against the applicable Mining Association of Canada "Toward Sustainable Mining" indicators.

In addition to the Company's safety performance, the report includes many other accomplishments such as energy efficiency initiatives, community outreach, and metallurgical process improvements that contribute to improved environmental performance. Avalon is committed to working closely with its Indigenous partners to create lasting economic and social benefits in the communities. In addition to its partners in the NWT, dialogue is ongoing with the Acadia First Nation in Nova Scotia as it relates to the East Kemptonville Project and with Wabaseemoong Independent Nations ("WIN") and Métis Nation of Ontario with respect to the Separation Rapids Lithium Project, and was recently initiated with the Eabametoong First Nation for the Lilypad Cesium Project.

To provide independent advice as to the efficacy of the Company's CSR work, the Company maintains an independent Sustainability Advisory Committee ("SAC") that meets intermittently to review all of the Company's sustainability-oriented work at all its projects. Recently, meetings have been infrequent due to the low level of current development activity although the members were all invited to review and comment on the 2018 report. In recognition of its sustainability efforts, Avalon has once again placed among *Corporate Knights'* 2018 Future 40 Responsible Corporate Leaders in Canada from a shortlist of eligible small and mid-size organizations.

The methodology for the 2018 Future 40 Responsible Corporate Leaders in Canada ranking is based on 16 key performance indicators covering resource, employee and financial management. The full methodology for this year's ranking is available from Corporate Knights here: <http://www.corporateknights.com/reports/future-40/2018-future-40-methodology-15085128/>. Private or publicly-listed companies headquartered in Canada with revenue of under \$1 billion and evidence of ESG reporting are eligible. Ranking is based on publicly-disclosed data, verified by the companies prior to project completion.

The full ranking can be viewed in *Corporate Knights Magazine's* Spring 2018 issue or online at [www.corporateknights.com/reports/2018-future-40/2018-future-40-results-15241106/](http://www.corporateknights.com/reports/2018-future-40/2018-future-40-results-15241106/).

The Company's focus is on materials that enable clean technology, including solar and wind power. In order to do this sustainably, Avalon designs its operations to minimize environmental impacts and greenhouse gas emissions, while planning for rehabilitation and productive use of the land post closure. The Company also now applies a staged-development approach to its cleantech materials projects, which involves starting production at a modest scale, to minimize project footprint and potential risks to environment, while also reducing investment risk and creating opportunities for its Indigenous business partners.

## Administration and Other

Corporate and Administrative expenses totalled \$2,724,759 during Fiscal 2018, a 5% decrease from the amount incurred in Fiscal 2017 (\$2,877,792). The main areas of decreased operating expenses for the Year were expenses on salaries and benefits and public and investor relations.

Salaries and benefits for the Year decreased by approximately 8% to \$1,387,249 compared to \$1,509,865 in Fiscal 2017. The decrease in salaries and benefits was primarily related to the reduced staffing levels.

Expenses on public and investor relations for the Year decreased slightly by \$40,251 (9%) to \$389,885 compared to \$430,136 in Fiscal 2017, primarily due to a reduction in the number of

investment conferences participated in by the Company in 2018. Investor relations remains a priority due to the ongoing need to attract investment capital but recent efforts have focused more on sophisticated investors and family offices than retail investors due to overall market conditions.

Share based compensation decreased to \$149,286 for the Year compared to \$183,108 for Fiscal 2017. This decrease is primarily related to the decrease in the number of options earned during the Year compared to Fiscal 2017.

On August 31, 2018, the fair values of the Company's outstanding derivative liabilities (which included the warrants denominated in US\$ warrants, the A1 Warrants, B1 Warrants and the C1 Warrants) were re-measured using the Black-Scholes pricing model, which resulted in a gain of \$562,216 for the Year (being the decrease in the estimated value of these warrants between August 31, 2018 and August 31, 2017) and a gain of \$151,975 for the Quarter (being the decrease in the estimated value of these warrants between May 31, 2018 and August 31, 2018). The changes in the estimated value of these warrants are mainly caused by the fluctuation in the trading price of the Company's common shares on August 31, 2018 compared to August 31, 2017 and May 31, 2018, as well as the issuance of 3,750,000 C1 warrants in June, 2018.

The fair values of the Company's outstanding convertible redeemable preferred shares (issued in March 2017, January 2018 and June 2018) were also re-measured, which resulted in losses of \$535,500 and \$137,812 for the Year and the Quarter, respectively.

Corporate and Administrative expenses totalled \$648,159 during the Quarter, a 3% decrease from the amount incurred during the comparative quarter in fiscal 2017 (\$668,998). The main area of decreased operating expenses for the Quarter was salaries and benefits, which were partly offset by the increase in expenses on public and investor relations.

Salaries and benefits decreased by \$69,293 (18%) to \$320,089 compared to \$389,382 for the same quarter in Fiscal 2017. This decrease is primarily related to the reduced staffing levels, and to the decrease in the provision for accrued vacation days.

Expenses on public and investor relations increased by \$66,496 (113%) compared to the same quarter in Fiscal 2017. This increase was due to the need to accelerate efforts to reach out to new investors which required retaining several new consultants to introduce the Company into new markets primarily in Europe and the US. This also included work to introduce the Company into the growing community of "Impact" investors; those motivated to invest in Companies such as Avalon, demonstrating high performance in environmental and social responsibility.

Share based compensation expense totalled \$36,824 for the Quarter compared to \$42,934 for the same quarter in Fiscal 2017. This decrease is primarily related to the decrease in the estimated fair values of options earned during the Quarter compared to the same quarter in Fiscal 2017.

## Summary of Quarterly Results

The following selected financial data is derived from the unaudited condensed consolidated interim financial statements of the Company.

Fiscal Year For the Quarters Ended	2018				2017			
	Aug. 31	May 31	Feb. 28	Nov. 30	Aug. 31	May 31	Feb. 29	Nov. 30
	\$	\$	\$	\$	\$	\$	\$	\$
Revenue (Interest)	14,340	20,204	12,484	14,749	16,080	7,088	2,544	2,499
Net Loss before discontinued operations	786,927	682,931	1,142,848	628,038	835,616	1,312,870	568,543	640,292
Net Loss	786,927	682,931	1,142,848	628,038	835,616	1,312,870	568,543	640,292
Net Loss, per share, basic and diluted	0.004	0.003	0.005	0.003	0.004	0.007	0.003	0.004

The fluctuation on quarterly net loss is primarily due to share-based compensation expenses recognized as stock options granted to directors, officers, employees and consultants of the Company are earned, the impairment losses recognized on resource properties, changes in the fair value of derivative liabilities and convertible redeemable preference shares, and expensed financing transaction costs. The costs of resource properties are written down at the time the properties are abandoned or considered to be impaired in value.

## Liquidity and Capital Resources

In management's view, given the nature of the Company's operations, which consist of the exploration and development of mineral properties, the most relevant financial information relates primarily to current liquidity, solvency, and planned property expenditures. The Company's financial success will be dependent on the economic viability of its resource properties and the extent to which it can discover and develop new mineral deposits. Such development may take several years to complete and the amount of resulting income, if any, is difficult to determine. The sales value of any mineralization discovered by the Company is largely dependent on factors beyond the Company's control, including the market value of the metals and minerals to be produced.

The Company manages its capital structure and makes adjustments to it based on the funds available to the Company in light of changes in general economic conditions, the Company's short term working capital requirements, and its planned exploration and development program expenditure requirements.

As the Company is in the development stage, its principal source of capital is from the issuance of common shares. In order to achieve its objectives, the Company expects to spend its existing working capital and raise additional funds as required.

As at August 31, 2018, the Company has current assets of \$625,244 and current liabilities of \$848,309. The holder of the Company's convertible redeemable preferred shares is entitled to demand repayment of the applicable redemption value per share in cash (which totalled \$3,195,000 as at August 31, 2018) upon the occurrence of certain Redemption Events. Excluding the deferred flow-through share premium of \$52,157, the Company's adjusted working capital deficit was \$170,908 (calculated by adding back the deferred flow-through share premium of \$52,157 to the working capital deficit of \$223,065). As the de-recognition of the balance of the deferred flow-through share premium will not require the future outflow of resources by the Company, it is management's belief that the adjusted working capital figure provides useful information in assessing the Company's liquidity risk. As at August 31, 2017, the Company had adjusted working capital of \$556,112 and cash and cash equivalents on hand of \$1,073,574.

The Company's monthly operating expenditures, excluding expenditures on resource property work programs, average \$290,000 during periods of moderate project activity. The Company's anticipated resource property expenditures for Fiscal 2019, assuming the requisite financing is in place, are budgeted at approximately \$1,500,000.

Subsequent to the Quarter as further described under Subsequent Events, the Company completed a private placement and issued 5,375,000 units at the price of \$0.07 per unit for gross proceeds of \$376,250.

The Company will need to raise additional capital to meet its ongoing expenditure obligations or reduce its current overhead costs. Initiatives both to reduce overhead costs and to raise additional capital are in progress although there can be no assurances that the Company will be able to raise additional funds required for all planned expenditures. As a result, certain expenditures may have to be delayed until sufficient funding has been raised. Given the continuation of weak investor sentiment and capital market conditions in the junior resource sector, there exists an uncertainty as to the Company's ability to raise sufficient additional funds on favourable terms. This condition indicates the existence of a material uncertainty that raises substantial doubt about the Company's ability to continue as a going concern. The Company's expenditures on other discretionary

exploration and development activities have some scope for flexibility in terms of amount and timing, which can be adjusted accordingly.

The Company does not have any externally imposed capital requirements other than those certain Redemption Events contained in the preferred share terms. The Company continues to work on attracting more substantial project financing through the participation of one or more strategic partners, a long term construction debt financing facility, and/or through the equity markets. If the Company is not able to secure financing on satisfactory terms, expenditures on the development of its projects will need to be delayed.

All of the Company's resource properties, are owned, leased or licenced with minimal holding costs. The most significant holding costs being annual lease rental fees on Nechalacho of \$20,998 and the annual expenditures related to the mining leases at Separation Rapids and Warren Township totalling \$3,327. As at August 31, 2018, the Company is required to incur additional Canadian Exploration Expenditures ("CEE") of \$237,922 by December 31, 2019. This amount represents the remaining balance of the required expenditures resulting from the private placement completed in July, 2018.

A joint venture with an industry partner or end-user may represent an attractive alternative for financing the further stages in the development of any of the Company's projects once the capital requirements become relatively large.

The Company has an operating lease for its premises. As at the date of this MDA, the minimum lease commitments under these leases are as follows:

Fiscal year ended August 31, 2019	\$	238,796
2020	\$	333,275
2021	\$	348,155
2022	\$	351,875
2023	\$	359,315
2024 and thereafter	\$	484,047

## Off Balance Sheet Arrangements

As at August 31, 2018, the Company had no material off balance sheet arrangements such as guaranteed contracts, contingent interests in assets transferred to an entity, derivative instrument obligations or any instruments that could trigger financing, market or credit risk to the Company.

## Transactions with Related Parties

Balances and transactions between the Company and its subsidiaries have been eliminated on consolidation and are not disclosed here. Details of the transactions between the Company and other related parties are disclosed below:

### a) Trading transactions

There had been no material trading transactions with related parties during each of the years ended August 31, 2018, 2017 and 2016, other than the participation by certain related parties in certain equity offerings as listed below:

- (i) on March 11, 2016, pursuant to the Private Placement, Mr. Donald Bubar subscribed for 1,000,000 PP Units at \$0.10 per unit (note 12(b)(iii)); and
- (ii) the participation by certain related parties in the November 2017 Private Placement, whereby Donald Bubar, Director, President and CEO, Mark Wiseman, Vice President Sustainability, Patricia Mohr, Director subscribed for 200,000, 55,000 and 50,000 flow-through shares at \$0.145 per share, respectively.

## b) Compensation of key management personnel

The remuneration of directors and other key members of the Company's senior management team during the three and twelve months ended August 31, 2018 and 2017 were as follows:

	Three Months Ended		Twelve months Ended	
	August 31, 2018	August 31, 2017	August 31, 2018	August 31, 2017
Salaries, benefits and directors' fees <sup>(1)</sup>	\$ 418,547	\$ 438,731	\$ 1,692,551	\$ 1,744,508
Share based compensation <sup>(2)</sup>	23,905	34,180	118,991	281,657
	<u>\$ 442,452</u>	<u>\$ 472,911</u>	<u>\$ 1,811,542</u>	<u>\$ 2,026,165</u>

<sup>(1)</sup> Salaries and benefits of key management personnel capitalized to exploration and evaluation assets and PPE for the three and twelve months ended August 31, 2018 totaled \$164,641 (2017 - \$143,080) and \$577,224 (2017 - \$571,471), respectively.

<sup>(2)</sup> Fair value of stock options earned and recognized as share based compensation during the respective reporting period.

## Subsequent Events

Subsequent to the end of the Year, the Company:

- granted an aggregate of 100,000 stock options with a weighted average exercise price of \$0.10 per share to certain employees of the Company. The weighted average contract life of these options at issuance was 5 years;
- issued a total of 6,094,954 common shares pursuant to the conversion of 30 A1 Preferred Shares, 20 B1 Preferred Shares and 10 C1 Preferred Shares;
- had 1,400,000 stock options with a weighted average exercise price of \$0.17 per share expire;
- had 272,727 broker's compensation warrants with an exercise price of \$0.25 per share expire;
- completed a private placement and issued 5,375,000 units at the price of \$0.07 per unit for gross proceeds of \$376,250. Each unit was comprised of one common share and one half of one common share purchase warrant. Each whole warrant entitles the holder to acquire one common share at a price of \$0.12 for a period of two years from the closing date of the private placement (the "Closing Date"), or if the closing price of the common shares on the TSX is \$0.16 or higher for a period of twenty consecutive trading days after the Closing Date, the Company may, by notice to the holder reduce the expiry date of the warrants to not less than 30 days from the date of such notice ("Accelerated Expiry Date"). Donald Bubar, Director, President and CEO subscribed for 1,000,000 units; and
- entered into a \$500,000 convertible security funding agreement ("Funding Agreement") with Lind. The convertible security under the Funding Agreement has a two year term and will accrue a simple interest rate obligation of 10% on the amount funded that is prepaid and attributed to its face value upon issuance. Lind will be entitled to convert the convertible security commencing 180 days after execution of the Funding Agreement at a conversion

price equal to the higher of (a) 80% of the five day trailing VWAP of the common shares prior to the date of conversion, and (b) the five day trailing VWAP of the shares prior to the date of conversion, less the maximum discount allowable in accordance with TSX rules. Company has floor price protection such that if any conversion results in an effective conversion price of less than \$0.05 per share, then the Company has the right to instead repay the amount that was subject to that conversion for a 5% premium. The Company also has the right to repurchase the convertible security at any time.

In conjunction with the closing of the convertible security, Lind will receive a commitment fee of \$15,000 and 4,575,000 common share purchase warrants. Each warrant entitles the holder to purchase one common share of the Company at a price of \$0.07 per common share until 36 months after closing.

## Financial Instruments

The Company's financial instruments consist of cash and cash equivalents, receivables, accounts payable and accrued liabilities, warrants denominated in foreign currency, convertible redeemable preferred shares, the A1 Warrants and the B1 warrants.

Management does not believe these financial instruments expose the Company to any significant interest, currency or credit risks arising from these financial instruments. The fair market values of cash and cash equivalents, receivables, and accounts payable and accrued liabilities approximate their carrying values.

The Company has 6,466,513 warrants outstanding as at August 31, 2018, with an original exercise price of US\$0.56 per share ("US\$ Warrants"). These warrants are subject to certain anti-dilution provisions, which may reduce the exercise price, with a floor of US\$0.5095 per share. The adjusted exercise price as calculated by the anti-dilution provisions as at August 31, 2018 and as at the date of this MDA is US\$0.5223. These warrants are exercisable until June 13, 2021. These warrants were recorded at fair value at the time of issuance, and are re-measured at fair value using the Black-Scholes pricing model at each financial statement reporting date, with the resulting change in fair value being recorded in the statement of comprehensive loss.

As the Company has the right to redeem all of the outstanding A1, B1 and C1 Preferred Shares at any time at a 5% premium to the redemption value, the total fair value of the 180 A1 Preferred Shares, 240 B1 Preferred Shares and the 150 C1 Preferred Shares as at August 31, 2018 is \$1,181,250, \$1,386,000 and \$787,500, respectively. The number of common shares to be issued would be 59,235,294 if all of the outstanding A1, B1 and C1 Preferred Shares had been converted into common shares based on the closing price of the Company's common shares on the TSX of \$0.075 on August 31, 2018.

Interest income from cash and cash equivalents are recorded in the statement of comprehensive loss.

## Outstanding Share Data

### *a) Common and Preferred Shares*

The Company is presently authorized to issue an unlimited number of common shares without par value. The Company is also authorized to issue up to 25,000,000 preferred shares without par value, of which 950 have been issued and 570 are outstanding as at August 31, 2018.

As at August 31, 2018, the Company had 237,018,428 common shares, 180 Series A1 Preferred Shares, 240 Series B1 Preferred Shares and 150 Series C1 Preferred Shares issued and outstanding. Subsequent to the end of the Year, and as described earlier under

“Subsequent Events”, 6,094,954 common shares were issued pursuant to the conversion of 30 A1 Preferred Shares, 20 B1 Preferred Shares and 10 C1 Preferred Shares, and 5,375,000 common shares were issued pursuant to a private placement. As at the date of this MDA, the Company has 248,488,382 common shares, 150 Series A1 Preferred Shares, 220 Series B1 Preferred Shares and 140 Series C1 Preferred Shares outstanding.

**b) Options**

As at August 31, 2018, the Company had an aggregate of 11,345,000 incentive stock options outstanding with a weighted average exercise price of \$0.26 (of which 7,816,250 were vested and 3,528,750 were unvested). Subsequent to the end of the Quarter, 100,000 options were granted and 1,400,000 options had expired (as described earlier under “Subsequent Events”). As at the date of this MDA, the Company has 10,045,000 incentive stock options with a weighted average exercise price of \$0.27 outstanding.

**c) Warrants**

As at August 31, 2018 the Company has the following common share purchase warrants outstanding:

- i. 6,466,513 US\$ Warrants, with an original exercise price of US\$0.56 per share and are exercisable until June 13, 2021. These warrants are also subject to certain anti-dilution provisions, which may reduce the exercise price, with a floor of US\$0.5095 per share. The adjusted exercise price as calculated by the anti-dilution provisions as at August 31, 2018 and as at the date of this MDA is US\$0.5223;
- ii. 30,000 warrants, issued pursuant to the Accommodation Agreement, with an average exercise price of \$0.31 per share and will expire as follows: 10,000 warrants on July 31, 2019, 10,000 warrants on July 31, 2020 and 10,000 warrants on August 2, 2021;
- iii. 2,400,000 warrants with an exercise price of \$0.16 per share and exercisable until November 3, 2019;
- iv. 6,900,000 A1 Warrants with an exercise price of \$0.23 per common share which are exercisable until March 10, 2022;
- v. 6,250,000 B1 Warrants with an exercise price of \$0.15 per common share which are exercisable until January 15, 2023;
- vi. 1,400,000 warrants with an exercise price of \$0.12 per share expiring on June 29, 2020, or if the closing price of the common shares on the TSX is \$0.16 or higher for a period of twenty consecutive trading days after the June 29, 2018, the Company may, by notice to the holder reduce the expiry date of the warrants to not less than 30 days from the date of such notice;
- vii. 2,750,000 warrants with an exercise price of \$0.12 per share expiring on July 11, 2020, or if the closing price of the common shares on the TSX is \$0.16 or higher for a period of twenty consecutive trading days after the July 11, 2018, the Company may, by notice to the holder reduce the expiry date of the warrants to not less than 30 days from the date of such notice; and
- viii. 3,750,000 C1 Warrants with an exercise price of \$0.125 per common share which are exercisable until June 29, 2023.

The Company is also committed to issue 20,000 warrants to the NWTMN in two equal installments of 10,000 warrants upon the Nechalacho Project meeting certain milestones. These warrants will have a contractual term of five years and will have an exercise price

based on the then current market price of the Company's common shares at the date of issue of the warrants.

Subsequent to the end of the Year, the Company issued 2,687,500 warrants with an exercise price of \$0.12 per share, of which 2,400,000 are expiring on the earlier of November 1, 2020 and the Accelerated Expiry Date, and 287,500 are expiring on the earlier of November 23, 2020 and the Accelerated Expiry Date (as described earlier under "Subsequent Events").

#### **d) *Brokers' Compensation Warrants***

As at August 31, 2018, the Company had the following compensation warrants outstanding:

- i. 272,727 compensation warrants with an exercise price of \$0.25 per common share, which are exercisable until November 7, 2018;
- ii. 150,000 compensation warrants with an exercise price of \$0.15 per common share, which are exercisable until December 23, 2018;
- iii. 204,000 compensation warrants with an exercise price of \$0.15 per common share, which are exercisable until June 12, 2019;
- iv. 186,000 compensation warrants with an exercise price of \$0.145 per common share, which are exercisable until August 16, 2019;
- v. 288,000 compensation warrants with an exercise price of \$0.15 per common share, which are exercisable until November 3, 2019; and
- vi. 132,000 compensation warrants with an exercise price of \$0.15 per common share, which are exercisable until December 22, 2019.

Subsequent to the end of the Year, 272,727 broker's compensation warrants with an exercise price of \$0.25 per share have expired.

### **Disclosure Controls and Procedures**

Disclosure controls and procedures are designed to provide reasonable assurance that material information is gathered and reported to senior management, including the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), as appropriate, to permit timely decisions regarding public disclosure.

Management, including the CEO and CFO, has designed or caused to be designed under their supervision, disclosure controls to provide reasonable assurance that the information required to be disclosed in annual filings, interim filings, or other reports filed or submitted under Canadian securities legislation, or reports filed or submitted under the U.S. Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time period specified in those rules.

### **Internal Control over Financial Reporting**

The CEO and CFO are also responsible for the design of the Company's internal controls over financial reporting ("ICFR") to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. Because of its inherent limitation, internal control over financial reporting may not prevent or detect misstatements.

Under the supervision, and with the participation, of the CEO and CFO, management conducted an evaluation of the effectiveness of the Company's ICFR based on the framework Internal Control -

Integrated Framework (COSO 2013 framework) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, the CEO and CFO have concluded that the design and operation of the Company's ICFR were effective as at August 31, 2018. No material weaknesses were identified by management during this evaluation.

There have been no changes to the Company's design of internal controls over financial reporting that occurred during the Quarter that materially affected, or are reasonably likely to affect, the Company's ICFR.

## **Critical Accounting Judgments and Estimation Uncertainties**

The preparation of the consolidated financial statements in conformity with IFRS requires that the Company's management make critical judgments, estimates and assumptions about future events that affect the amounts reported in the consolidated financial statements and the related notes thereto. Actual results may differ from those estimates. Estimates and assumptions are reviewed on an on-going basis based on historical experience and other factors that are considered to be relevant under the circumstances. Revisions to estimates are accounted for prospectively.

The Company has identified the following significant areas where critical accounting judgments, estimates and assumptions are made and where actual results may differ from these estimates under different assumptions and conditions and may materially affect financial results or the financial position reported in future periods.

Further details of the nature of these assumptions and conditions may be found in the relevant notes to the consolidated financial statements.

### ***Key Sources of Estimation Uncertainty***

Information about assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment are included in the following notes:

#### ***Recoverability of Exploration and Evaluation Assets, Development Assets and Property, Plant and Equipment***

The Company assesses its long-lived assets, specifically all exploration and evaluation assets, development assets and PPE at each reporting date to determine whether any indication of impairment exists. Where an indicator of impairment exists, a formal estimate of the recoverable amount is made, which is the higher of the fair value less costs of disposal and value in use. These assessments require the use of estimates and assumptions such as long-term commodity prices, discount rates, foreign exchange rates, future capital requirements, exploration potential and operating performance.

#### ***Determination of Reserve and Resource Estimates***

Mineral reserves and resources are estimates of the amount of ore that can be economically and legally extracted from the Company's exploration and development properties. The estimation of recoverable reserves is based upon factors such as estimates of commodity prices, production costs, production techniques, future capital requirements and foreign exchange rates, along with geological assumptions and judgments made in estimating the size and grade of the ore body. Changes in the reserve or resource estimates may impact the carrying value of exploration and evaluation assets, development assets, PPE, site closure and reclamation provision and amortization expense.

#### ***Fair Value of Share Based Payments and Warrants***

The Company follows IFRS 2, Share-based Payment, in determining the fair value of share based payments. This calculated amount is not based on historical cost, but is derived based on assumptions (such as the expected volatility of the price of the underlying security, expected hold

period before exercise, dividend yield and the risk-free rate of return) input into a pricing model. The model requires that management make forecasts as to future events, including estimates of: the average future hold period of issued stock options and compensation warrants before exercise, expiry or cancellation; future volatility of the Company's share price in the expected hold period; dividend yield; and the appropriate risk-free rate of interest. The resulting value calculated is not necessarily the value that the holder of the option or warrant could receive in an arm's length transaction, given that there is no market for the options or compensation warrants and they are not transferable. Similar calculations are made in estimating the fair value of the warrant component of an equity unit. The assumptions used in these calculations are inherently uncertain. Changes in these assumptions could materially affect the related fair value estimates.

#### *Site Closure and Reclamation Provision*

The Company's accounting policy for the recognition of a site closure and reclamation obligation requires significant estimates and assumptions such as: requirements of the relevant legal and regulatory framework, the magnitude of possible disturbance and the timing thereof, extent and costs of required closure and rehabilitation activity, and discount rate. These uncertainties may result in future actual expenditures differing from the amounts currently provided.

Site closure and reclamation provision recognized is periodically reviewed and updated based on the facts and circumstances available at the time.

#### *Property, Plant and Equipment - Estimated Useful Lives*

Management estimates the useful lives of PPE based on the period during which the assets are expected to be available for use. The amounts and timing of recorded expenses for depreciation of PPE for any period are affected by these estimated useful lives. The estimates are reviewed at least annually and are updated if expectations change as a result of physical wear and tear, technical or commercial obsolescence and legal or other limits to use. It is possible that changes in these factors may cause significant changes in the estimated useful lives of the Company's PPE in the future.

### **Critical Judgments**

Information about critical judgments in applying accounting policies that have most significant effect on the consolidated financial statements are as follows:

#### *Capitalization of Exploration and Evaluation Costs*

Exploration and evaluation costs incurred during the year are recorded at cost. Capitalized costs include costs directly attributable to exploration and evaluation activities, including salaries and benefits of employees who are directly engaged in the exploration and evaluation activities. Administrative and other overhead costs are expensed. Exploration and evaluation costs incurred that have been determined to have future economic benefits and can be economically recoverable are capitalized. In making this judgment, management assesses various sources of information including but not limited to the geologic and metallurgic information, history of conversion of mineral deposits to proven and probable mineral reserves, scoping and feasibility studies, proximity of operating facilities, operating management expertise and existing permits.

## **Changes in Accounting Policies Including Initial Adoption**

The Company did not adopt any new accounting standards during the Year.

## **Recent Accounting Pronouncements**

The following pronouncements are issued but not yet effective:

### *IFRS 9, Financial Instruments*

IFRS 9, *Financial instruments* (“IFRS 9”) was issued by the IASB in July 2014 and will replace IAS 39. IFRS 9 utilizes a single approach to determine whether a financial asset is measured at amortized cost or fair value and a new mixed measurement model for debt instruments having only two categories: amortized cost and fair value. The approach in IFRS 9 is based on how an entity manages its financial instruments in the context of its business model and the contractual cash flow characteristics of the financial assets. Final amendments released in July 2014 also introduce a new expected loss impairment model and limited changes to the classification and measurement requirements for financial assets. IFRS 9 is effective for annual periods beginning on or after January 1, 2018. The Company has completed evaluating the impact of this standard and amendments and does not expect the Company’s consolidated financial statements to be significantly affected by the adoption of IFRS 9 given its current business model and the amount of its financial assets.

### *IFRS 15, Revenue from Contracts and Customers*

IFRS 15, *Revenue from Contracts and Customers* (“IFRS 15”) was issued by the IASB in May 2014, and will replace IAS 18, *Revenue*, IAS 11, *Construction Contracts*, and related interpretations on revenue. IFRS 15 sets out the requirements for recognizing revenue that apply to all contracts with customers, except for contracts that are within the scope of the standards on leases, insurance contracts and financial instruments. IFRS 15 uses a control based approach to recognize revenue which is a change from the risk and reward approach under the current standard. Companies can elect to use either a full or modified retrospective approach when adopting this standard and it is effective for annual periods beginning on or after January 1, 2018. The Company has completed evaluating the impact of IFRS 15 and does not expect the Company’s consolidated financial statements to be significantly affected by the adoption of IFRS 15 as the Company is not currently generating any significant revenue.

### *IFRS 16, Leases*

IFRS 16, *Leases* (“IFRS 16”) was issued by the IASB in January 2016, and will replace IAS 17 *Leases*. IFRS 16 specifies the methodology to recognize, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all leases except for short-term leases and leases with low value assets. IFRS 16 substantially carries forward the lessor accounting requirements in IAS 17. IFRS 16 is effective for annual periods beginning on or after January 1, 2019, with early adoption permitted if IFRS 15 has also been adopted. A lessee will apply IFRS 16 to its leases either retrospectively to each prior reporting period presented; or retrospectively with the cumulative effect of initially applying IFRS 16 being recognized at the date of initial application. The Company is currently evaluating the impact of IFRS 16 on its consolidated financial statements.

## **Forward-Looking Statements, Risk Factors and Qualified Persons**

Certain of the statements that are not historical facts contained in this MDA are forward-looking statements that involve risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in the forward-looking statements. Such forward-looking statements reflect the Company’s current views with respect to future events and include, among other things, statements regarding targets, estimates and/or assumptions in respect of reserves and/or resources, and are based on estimates and/or assumptions related to future economic, market and other conditions that, while considered reasonable by management, are inherently subject to risks and uncertainties, including significant business, economic, competitive, political and social uncertainties and contingencies. These estimates and/or assumptions include, but are not limited to:

- grade of ore;
- mineral product and commodity prices;

- metallurgical recoveries;
- operating costs;
- achievement of current timetables for development;
- strength of the global economy;
- availability of additional capital; and
- availability of supplies, equipment and labour.

Factors that could cause the Company's actual results, performance, achievements, developments or events to differ materially from those expressed or implied by forward-looking statements include, among others, the factors described or referred to under "Description of the Business - Risk Factors" in the Company's Annual Information Form for the year ended August 31, 2018, and:

- risks related to the Company's history of losses, lack of operating history, ability to generate material revenues and continue as a going concern;
- risks related to establishing new mining operations in the event that the Company elects to proceed with the development of one of its mineral projects;
- risks related to the Company's need for additional financing;
- risks related to any joint venture or strategic alliances that may be entered into by the Company;
- risks related to the progression of the Separation Rapids Lithium Project to a positive feasibility stage;
- risks related to securing product off-take agreements on a timely basis;
- risks related to the unique ore type at the Nechalacho Rare Earth Elements Project ("Nechalacho" or the "Nechalacho Project") and the Separation Rapids Lithium Project for which known metallurgical processes have not previously been applied;
- uncertainty related to title to the Company's properties as well as the risk of delays in obtaining licenses and permits as a result of local opposition, including uncertainty related to any challenges in connection with Aboriginal land title claims and Aboriginal rights
- risks related to the possible existence of rights and interests of Aboriginal groups, which may limit the Company's ability to develop its properties;
- risks related to the need to acquire properties for the hydrometallurgical plant and potentially a rare earth refinery for the Nechalacho Project;
- risks that actual capital costs, production schedules and economic returns for the Nechalacho Project may differ significantly from those anticipated by the Company;
- risks related to the demand for technology metals and minerals and fluctuations in their pricing ;
- risks related to the demand for lithium and fluctuations in its pricing;
- risks related to competition and the actions of competitors;
- risks related to costs or delays in the commercialization of rare earth products;
- uncertainties related to the fact that the Company's mineral resources and mineral reserves are only estimates;
- risks related to the Company's ability to secure the required mineral tenure licenses at the East Kemptville Tin-Indium Project ("East Kemptville Project") which could adversely affect the Company's ability to conduct further studies and exploration activities;
- risks related to obtaining, maintaining and renewing licenses and permits, and the material costs, liabilities and obligations in connection therewith;
- risks that the Company will be subject to material costs, liabilities and obligations in connection with environmental laws, regulations and approvals and that approvals will not be available;
- uncertainties involving uninsured risks;
- risks related to possible shortages of supplies, equipment and labour;
- risks related to the Company's ability to attract and retain qualified management and technical personnel;
- uncertainty whether the Company will acquire commercially mineable ore deposits or whether the current mineral deposits identified by the Company can be developed as commercially viable ore bodies;
- risks inherent to the competitive nature of the mineral industry;

- risks related to the extensive federal, state, provincial, territorial and local laws and regulations to which the Company's activities are subject;
- risks related to the availability and reliability of adequate infrastructure;
- risks and hazards inherent to the mining industry;
- risks related to any changes in critical accounting estimates that adversely affect the Company's financial results;
- risks related to potential conflicts of interest of the Company's directors and officers who may have involvement with other resource companies;
- risks due to being a "passive foreign investment company" for U.S. purposes;
- risks related to fluctuations of currency exchange rates;
- risks related to share price volatility;
- risks related to dilution of existing shareholders;
- risks related to not paying cash dividends;
- risks related to being a non-US corporation; and
- risks related to there being no market for the Company's warrants.

Most of the foregoing factors are beyond the Company's ability to control or predict. Although the Company has attempted to identify important factors that could cause actual results, performance, achievements, developments or events to differ materially from those described in forward-looking statements, there may be other factors that cause actual results, performance, achievements, developments or events not to be as anticipated, estimated or intended. There can be no assurance that the estimates and/or assumptions upon which these forward-looking statements are based will occur.

Readers can identify many of these statements by looking for words such as "believe", "expects", "will", "intends", "projects", "anticipates", "estimates", "continues" or similar words or the negative thereof. There can be no assurance that the plans, intentions or expectations upon which these forward-looking statements are based will occur.

The forward-looking statements contained herein are made as of the date of this MDA and are expressly qualified in their entirety by this cautionary statement. Readers should not place undue reliance on the forward-looking statements, which reflect management's plans, estimates, projections and views only as of the date hereof. The Company undertakes no obligation to publicly revise these forward-looking statements to reflect subsequent events or circumstances, except as required by applicable law.

The technical information included in this MDA, unless otherwise stated, has been reviewed and approved by Donald S. Bubar, P. Geo., President and Chief Executive Officer of the Company and Dr. William Mercer, P. Geo., Vice-President, Exploration of the Company. Mr. Bubar and Dr. Mercer are both Qualified Persons under National Instrument 43-101 ("NI 43-101").

## **Notice Regarding Presentation of our Mineral Reserve and Resource Estimates**

This MDA has been prepared in accordance with the requirements of Canadian securities laws, which differ from the requirements of United States securities laws. Unless otherwise indicated, all reserve and resource estimates included in this MDA have been prepared in accordance with NI 43-101. NI 43-101 is a rule developed by the Canadian Securities Administrators which establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects.

Canadian standards, including NI 43-101, differ significantly from the requirements of the United States Securities and Exchange Commission (the "SEC"), and reserve and resource information contained in this MDA may not be comparable to similar information disclosed by United States companies. In particular, and without limiting the generality of the foregoing, the term "resource" does not equate to the term "reserve". Under United States standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. The

SEC's disclosure standards normally do not permit the inclusion of information concerning "measured mineral resources", "indicated mineral resources" or "inferred mineral resources" or other descriptions of the amount of mineralization in mineral deposits that do not constitute "reserves" by United States standards in documents filed with the SEC. United States investors should also understand that "inferred mineral resources" have a great amount of uncertainty as to their existence and as to their economic and legal feasibility. It cannot be assumed that all or any part of an "inferred mineral resource" exists, is economically or legally mineable, or will ever be upgraded to a higher category. Under Canadian rules, estimated "inferred mineral resources" may not form the basis of feasibility or pre-feasibility studies except in rare cases. Disclosure of "contained ounces" in a resource estimate is permitted disclosure under Canadian regulations; however, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC standards as in-place tonnage and grade without reference to unit measures. The requirements of NI 43-101 for identification of "reserves" are also not the same as those of the SEC, and reserves reported by Avalon in compliance with NI 43-101 may not qualify as "reserves" under SEC standards. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in accordance with United States standards.

## **Other Information**

Additional information on the Company is available on SEDAR at [www.sedar.com](http://www.sedar.com) and on the Company's website at [www.avalonadvancedmaterials.com](http://www.avalonadvancedmaterials.com).