



## Management's Discussion and Analysis of Financial Statements for three and nine months ended May 31, 2017

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 three and nine months ended May 31, 2017 (the "Period"). The following information should be read in conjunction with the accompanying unaudited condensed consolidated interim financial statements for the Period and the consolidated financial statements and Annual Information Form for the year ended August 31, 2016. This MDA is prepared as of July 11, 2017.

### 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 OTCQX Best 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 producer and marketer of specialty metals and minerals and expanding the markets for its mineral products.

Avalon operates primarily in Canada with a focus on rare metals and minerals, including lithium, tantalum, niobium, cesium, indium, gallium, germanium, rare earth elements ("REE"), yttrium, zirconium as well as tin.

The Company is in the process of exploring or developing four of its six mineral resource properties. The Company completed a preliminary economic assessment ("PEA") of its Separation Rapids Lithium Project in September, 2016. Previously, the Company completed a feasibility study on its Nechalacho Project in April 2013 ("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 rare metals project, but is largely inactive at the present time due to reduced demand for rare earths, although it could be re-activated at any time.

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 2016, the Company released its fifth comprehensive Sustainability Report entitled Minerals for Transitioning Economies (the "2016 Sustainability Report").

The Company believes that industrial demand for the advanced materials products it seeks to produce, including lithium compounds, REE and tin, is growing due to their importance in an expanding array of applications in new technology particularly those related to energy efficiency and a cleaner environment.

### Exploration and Development Activities

Resource property expenditures for the three months ended May 31, 2017 (the "Quarter") totalled \$1,060,601, a 119% increase over the level of expenditures for the same quarter in fiscal 2016 (\$484,937). Of these expenditures, 92% were incurred on the Separation Rapids Project, 5% were incurred on the East Kemptville Project, and 3% were incurred on the Nechalacho Project. The increased expenditures are mainly related to the increase in expenditures on the Separation Rapids Project. The expenditures on the Separation Rapids Project increased to \$972,328 from \$277,754 in the same quarter in fiscal 2016. The increase is primarily related to the drilling program on the Separation Rapids Project which was completed during the Quarter.

No properties were abandoned during the Quarter.

Resource property expenditures for the nine months ended May 31, 2017 (the "Nine Month Period") totalled \$2,128,986, a 38% decrease over the level of expenditures for the nine months ended May 31, 2016 (\$3,458,365). Of these expenditures, 79% were incurred on the Separation Rapids Project, 10% were incurred on the East Kemptville Project, and 6% were incurred on Nechalacho. Expenditures on the Separation Rapids Project increased to \$1,691,123 from \$1,376,265 in the same period in fiscal 2016, primarily due to the expenditures incurred in 2017 for the drilling program. The expenditures on the East Kemptville Project decreased to \$208,141 from \$1,744,902 in the prior period, after completing the planned drilling program and metallurgical process development work. Expenditures on Nechalacho decreased to \$116,644 from \$276,429 in the prior period mainly due to the cessation of field operations and reduced metallurgical process development work. No properties were abandoned during the Nine Month Period.

### ***Separation Rapids Lithium Project***

During the Quarter, the Company incurred \$972,328 (2016 - \$277,754) in expenditures on the Separation Rapids Lithium Project near Kenora, Ontario. Approximately 66% was incurred on diamond drilling and geological work in support of the drilling program, which was completed during the Quarter, 12% was spent on metallurgical laboratory test work on optimization of the petalite flotation process and the evaluation of fluidized bed roasting within the hydrometallurgical process flowsheet., 8% on engineering and environmental studies and permitting which included generation of a basic layout for a demonstration size flotation circuit, 11% on acquiring additional mineral claims located adjacent to the north and west of the Company's existing Separation Rapids property and an quarrying permit, with the balance spent on community engagement and property maintenance.

The Spring 2017 drilling program announced in the Company's news release dated April 5, 2017 was completed in the Quarter with five holes (SR17-70 to 74) totalling 1,473 metres being drilled. Two holes were drilled on each of the west and east extensions of the main deposit, with the objective of expanding the resource and mapping the extent of the lepidolite and lithium mica rich zones. Broad intervals of lithium pegmatite mineralization were intersected in these four holes as anticipated (SR17-71 to 74). The fifth hole (SR17-70) was drilled on an untested target located approximately 1km west of the main deposit, but was not completed due to difficult ground conditions. This hole and a second planned hole on the west pegmatite will be completed in a future program, when access conditions improve. Three drill holes (SR17-71, 72, 74) intersected significant thicknesses of lepidolite mineralization which included SR17-74 to the northeast of the deposit specifically targeting lepidolite bearing rock. Sampling of the drill core has also been completed and 250 samples shipped for analysis. The remaining hole (SR17-73) intersected largely petalite bearing pegmatite. Assay results are expected by the end of July.

The processing of lepidolite has the additional advantage of reducing the quantity and associated management costs of waste materials from mining and increasing the sustainable use of the ore body by maximizing recoverable minerals.

Metallurgical investigations for the concentrator were again focused on optimisation of the petalite flotation process, particularly with regards to the impact of various recycle streams.

For the hydrometallurgical plant, work continued on process development for the lithium hydroxide production flowsheet particularly with regard to the potential use of fluidized bed roasting for pre-treating the petalite. Lithium hydroxide produced from the Separation Rapids petalite concentrate material was sent to the National Research Council ("NRC") who confirmed that it represents a suitable precursor for lithium ion battery cathode materials. NRC determined that the material compared well with another commercially available lithium battery material.

## Preliminary Economic Assessment

During the quarter ended November 30, 2016, the Company completed and filed the formal independent technical report on the PEA on the Separation Rapids Lithium Deposit (the "Deposit") prepared by Micon International Limited ("Micon"). The Deposit was originally evaluated by Avalon in 1997-2000 as a potential producer of lithium minerals (petalite) for glass-ceramics under a Pre-feasibility Study ("2000 PFS") (also prepared by Micon) in 2000. The purpose of this 2016 PEA was to investigate the potential for recovery of a lithium product suitable for the battery market from the same lithium resource, and the results confirm a technically viable process and positive economics for the recovery of a battery-grade lithium hydroxide product from a petalite concentrate.

*Please note that the PEA described herein is preliminary in nature, in that 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 preliminary economic assessment will be realized.*

The PEA development model contemplates facilities located at two separate sites: an open pit mine and concentrator located on the Company's mining lease approximately 75 km north of Kenora, Ontario and a hydrometallurgical plant located at an industrial site near the city of Kenora.

The model was based on the resource defined for the 2000 PFS and assumed an open pit to a final depth of 260 metres providing 950,000 tonnes of mineralized plant feed per year for 10 years at an average diluted grade of 1.2% Li<sub>2</sub>O. The mineralized plant feed would be crushed and processed at a concentrator constructed at the mine site. At full production, this concentrator would produce an average of 144,400 tonnes per year of petalite concentrate and 100,000 tonnes per year of feldspar concentrate. The petalite would be transported by truck to the proposed hydrometallurgical plant presently contemplated for Kenora.

The hydrometallurgical plant site selected for the purposes of the PEA is in close proximity to sources of hydropower, natural gas and water needed for the processing of the petalite. The hydrometallurgical plant would have the capacity to produce an average of 14,600 tonnes per year of lithium hydroxide. The lithium hydroxide would be bagged at the hydrometallurgical plant and loaded on to rail cars for shipment to market.

Non lithium-bearing rock produced in the mining operation would be stored at the mine site for potential recovery of other industrial minerals or use as aggregate in the surrounding region. Excess feldspar ore and magnetic concentrate from the concentrator process will also be stored separately at the mine site. Tailings from both the concentrator and the hydrometallurgical plant would be stored in a tailings management facility located at the mine site. Future engineering, procurement and construction of both the concentrator and the hydrometallurgical plant would proceed in parallel. In addition to the feldspar, several other by-products are potentially recoverable from the lithium ore and these will be investigated in more detail following further market studies and process testwork.

The discounted cash flow ("DCF") analysis yielded a 19% internal rate of return ("IRR") on a pre-tax basis and a 16% IRR on an after-tax basis, assuming 100% equity financing. The Project's net present value ("NPV") at an 8% discount rate is \$343 million pre-tax and \$228 million after-tax. Total Project construction capital costs were estimated at \$514 million, which is inclusive of \$86 million in contingencies and \$7.0 million in sustaining capital. The average lithium hydroxide price assumption used for this PEA was US\$11,000/tonne and the CAD:USD exchange rate assumption was US\$1.00 = CDN\$1.30. At the production rate modelled for this PEA, the currently delineated lithium resource would support lithium production for at least 10 years. There is sufficient high quality feldspar (an industrial mineral) in the resource to support production for at least 20 years.

The PEA development model covers all aspects of project development, including mining, mineral concentration, and hydrometallurgical processing, environmental management, permitting and stakeholder engagement as well as all related infrastructure. The capital and operating cost estimates were developed by Micon from first principle capital quotations, estimates from suppliers,

manufacturers, contractors and experience based on comparable operations in Canada and abroad. The capital and operating cost estimates were completed to a level consistent with an AACEI Class 4 estimate, with an intended level of accuracy of  $\pm 30\%$ , based on Q3 2016 prices, excluding escalation. Currency is Canadian dollars unless otherwise stated.

## Mineral Resources

Mineral Resources are summarized in the tables below. Measured and Indicated Resources are estimated to total 8.0 million tonnes at a grade of 1.29%  $\text{Li}_2\text{O}$  using a 0.6%  $\text{Li}_2\text{O}$  cut-off grade. In addition, the Deposit includes an estimated Inferred Resource of 1.63 million tonnes at 1.42%  $\text{Li}_2\text{O}$ . These resources also contain 39% feldspar.

The Deposit is hosted within a large, highly-evolved pegmatite body of the rare petalite sub-type, similar to the “Tanco” pegmatite: a rare metals producer located 60 km to the west at Bernic Lake, Manitoba. The Separation Rapids pegmatite forms a vertically-dipping body varying in thickness up to 70 metres and is traceable for approximately 1.5 km along strike. Unlike the Tanco pegmatite, it is highly deformed and was essentially flattened and stretched into its present sub-vertical orientation. The Deposit exhibits typical mineralogical zoning characteristics seen in other highly evolved rare metal pegmatites like Tanco, such as well-developed wall zones and a petalite-rich intermediate zone. Exploration potential exists to discover additional mineralogical sub-zones typical for such pegmatites enriched in other rare metals, notably tantalum and cesium. The Deposit has been partially delineated by exploration drilling over 500 metres of strike length to a depth of 260 metres, and is open for expansion.

The primary lithium bearing minerals in the deposit are petalite and lepidolite with minor spodumene. The feldspars include both albite and potassium feldspar. The other major rock-forming minerals are quartz and muscovite (also lithium-bearing). Accessory minerals include columbite-tantalite, cassiterite, apatite and topaz. Results from 69 historic diamond drill holes totalling 10,152 metres were used to create a 3-D model of the host pegmatite.

### Separation Rapids, Mineral Resource Estimate at 0.6% $\text{Li}_2\text{O}$ Cut-off Grade As at October 21, 2016

Class	Tonnes (Mt)	$\text{Li}_2\text{O}$ (%)	Total Feldspar (%)	$\text{Ta}_2\text{O}_5$ (%)	$\text{Cs}_2\text{O}$ (%)	$\text{Rb}_2\text{O}$ (%)	SG
Measured	4.03	1.32	39	0.006	0.017	0.343	2.66
Indicated	3.97	1.26	39	0.007	0.025	0.362	2.67
Measured plus Indicated	8.00	1.29	39	0.006	0.021	0.352	2.66
Inferred	1.63	1.42	39	0.008	0.016	0.360	2.64

#### Notes:

1. CIM Definition Standards for Mineral Resources and Mineral Reserves, 10 May, 2014 were followed for this mineral resource estimate.
2. The Qualified Person for this mineral resource is David Trueman, Ph.D., P.Geo. (MB).
3. The resource estimate is constrained by a 3D geologic model of the mineralized material - delineated in drilling programs completed in 1998-2001 for petalite.
4. Assay intervals for  $\text{Li}_2\text{O}$ ,  $\text{Ta}_2\text{O}_5$ ,  $\text{Cs}_2\text{O}$  and  $\text{Rb}_2\text{O}$  were interpolated using the Inverse Distance Weighted method to create a 3D block model.
5. The resource cut-off grade of 0.6%  $\text{Li}_2\text{O}$  was chosen to capture mineralization that is potentially amenable to mining, mineral concentration and off-site processing.
6. Li, Ta, Cs and Rb were originally analysed on all samples at XRAL Laboratory (Thunder Bay, Ontario) utilizing ICP (Li, Ta) and AA (Rb and Cs) and check analyses completed at CHEMEX Laboratory (Don Mills, Ontario) utilizing AA (Li) and ICP (Rb).
7. As well as due diligence to verify historic data, Avalon completed additional check analyses of historic drill core in 2016 utilizing ALS Laboratory (Vancouver) with a combination of fusion and ICP (method CCP-PKG01). Included as QAQC procedures was a lithium rock standard within the check analysis batches.

8. Total Feldspar is the total of potassium feldspar (microcline) and sodium feldspar (albite) and the value reflects the mean and median value of all samples with quantitative mineralogy determined.
9. The percentage Total Feldspar is based on analyses completed utilizing X-Ray Diffraction and Qemscan instrumentation on samples representing all lithological subunits of the mineral deposit. These analyses were completed at Carleton University in 1999 (XRD) and ALS Global Laboratory in 2016 (XRD and Qemscan, Kamloops). This is supported by quantitative mineralogy of metallurgical samples determined at SGS (Lakefield) and Anzaplan (Germany)
10. All figures are rounded to reflect the relative accuracy of the estimates. Summation of individual columns may not add-up due to rounding.
11. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resource will be converted into Mineral Reserves.
12. In addition, while the terms “measured”, “indicated” and “inferred” mineral resources are required pursuant to National Instrument 43-101, the U.S. Securities and Exchange Commission does not recognize such terms. Canadian standards differ significantly from the requirements of the U.S. Securities and Exchange Commission, and mineral resource information contained herein is not comparable to similar information regarding mineral reserves disclosed in accordance with the requirements of the U.S. Securities and Exchange Commission. U.S. investors should understand that “inferred” mineral resources have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. In addition, U.S. investors are cautioned not to assume that any part or all of Avalon’s mineral resources constitute or will be converted into reserves.

The model includes lithium resources with an average grade of below 1% Li<sub>2</sub>O. The lower grade lithium mineralization consists of a swarm of narrow lithium-bearing pegmatite dykes intruded into meta-volcanic rocks, where tests indicate the lithium resource can be pre-concentrated using optical sorting technology.

The resource block model has had an open pit mine design applied to it using Whittle Pit optimization resulting in 9.34 million tonnes of mineralized material at an average grade of 1.22% Li<sub>2</sub>O within the pit. The pit has a strip ratio of 1:5.6, resulting in 52 million tonnes of waste rock for stockpiling for use as aggregate. For the purpose of the PEA, the mine depth was limited to 260 metres.

The mine design has not been optimized and the appropriate timing to transition the operation to underground mining has yet to be determined. Further drilling is designed to identify additional resources at depth (as well as along strike) which would create the opportunity to include an underground mining operation in the development model.

### **Optimization Opportunities and Next Steps**

With the completion of a positive PEA on lithium hydroxide production, next steps are oriented primarily toward optimizing the process flowsheets and gathering all the technical information needed to design and build a demonstration scale plant facility. This facility will generate samples of all the potential mineral and chemical products for customer evaluation and acceptance. It will also provide the data needed to complete a definitive feasibility study and design the commercial-scale production facility. This demonstration plant could be designed and constructed within 2 years and a full size commercial operation could begin as early as 2 years later. The key factors going forward influencing the timely execution of the Project are: securing sufficient product offtake commitments to support Project financing; the availability of sufficient equity and/or debt financing and receipt of all requisite operating permits and approvals.

Avalon is carrying out additional drilling with the objective of increasing the mineral resources and better quantifying the lithium mineralogy in the resource, while continuing to optimize metallurgical processes to confirm design parameters and product properties. While the economics contained in the PEA are positive, ongoing metallurgical process development work, engineering and market research have identified opportunities to improve the overall Project economics or reduce Project risk. These include:

- Recovery of lithium from other lithium-bearing minerals in the resource, notably lepidolite, a lithium mica occurring in distinct sub-zones separate from the petalite resource;
- Defining a low-cost, clean energy solution for the operations;
- Improvements in lithium recovery rates in the flotation process and in the hydrometallurgical plant while maintaining high product quality;

- Expansion of feldspar markets through product research and market development work;
- The recovery of high purity silica and tantalum by-products;
- Integrating the production of petalite concentrate for glass-ceramics customers into the development model;
- Completion of identified environmental baseline studies required for the completion of the final Project Description that will start the formal permitting process; and
- Obtaining the required permits and regulatory approvals.

The development model presently contemplates connection to the hydro-electric grid near the Whitedog power generation station at a cost of \$11 million, including construction of a 25 km power transmission line and substation. The Company has begun to investigate the potential to meet the power needs for the mine and concentrator (estimated at 5 MW) using local low-cost, run-of-river power generation or other renewable energy supply delivered by an independent energy company, potentially in agreement with a local First Nation partner. An initial reconnaissance study has identified a promising site on the river close to the Deposit capable of meeting most of the operation's energy requirements at a lower total cost. The potential for wind power generation is also under consideration.

## **Lithium and Feldspar Markets**

### Lithium Compounds for Batteries

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").

It is clear that new lithium supply sources will be needed to meet the 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. Just one well-known example, the lithium battery Gigafactory of Tesla Motors Inc. in Nevada scheduled to begin production in 2017, is expected to consume up to 25,000 tonnes per year of lithium hydroxide after it has reached full production.

For the purposes of its 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. Prices as reported by other services such as Benchmark Minerals Intelligence, have continued to escalate since that time due to rapidly growing demand from battery makers.

### Feldspar

Feldspar is an industrial mineral used commonly in the manufacture of glass and ceramics. Feldspar is also used as a filler and extender in the production of paints, plastics and rubber. The glass market for feldspar in the United States represents the largest market at around 68%, while ceramics account for 23% and filler and other applications represent less than 10%. Market access depends upon product quality and freight costs to individual markets.

Pricing for feldspar in the USA currently ranges from US\$175/tonne to US\$250/tonne FOB plant. Avalon has based the feldspar revenue calculations for its PEA on a conservative price assumption of US\$170/tonne FOB Separation Rapids plant.

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

Avalon is committed to developing the 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, maximizing 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.

A detailed environmental baseline study was updated in 2007 and work has been ongoing to further update this study to align it with recent regulatory changes. Following some additional baseline work to validate the 2007 study, a Draft Project Description and Environmental Impact Assessment was produced during the quarter. Permitting was 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 potential exemption of the project from the Canadian Environmental Assessment Act due to the fact that the project does not exceed any of the regulated triggers under the Act and the low environmental impact of the project.

Initial studies suggest that aggregate stockpiles, tailing and concentrate storage areas will not contribute effluents of environmental concern. Dry stacking of tailing and concentrates will minimize long term storage risk, water use and optimize effluent quantity. A final project description is targeted for Q4 fiscal 2017, which is needed to start the formal permitting process.

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 Project business opportunities. The Company has also initiated dialogue with the Métis Nation of Ontario who holds Aboriginal rights in the area. Following the completion of the Draft Project Description, positive project review meetings were held with the Wabaseemong Chief and Council and with the Metis 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.

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**

Expenditures during the Quarter totalled \$35,340 (2016 - \$83,047), which were primarily incurred on mining lease payments, sample storage and supporting Natural Resources Canada's testwork program using samples from the Nechalacho REE 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 underlying 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 \$1.4 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.

Since the completion of the Feasibility Study (“Nechalacho FS”) in April, 2013, the Company has been engaged in metallurgical test work with the objective of optimizing the process flowsheets to improve recoveries and reduce costs. This involved introducing efficiencies to the Concentrator flowsheet, and designing a new flowsheet for the Hydrometallurgical Plant involving an alkali cracking process for treatment of the rare earth mineral concentrate as an alternative to the sulphuric acid bake process contemplated in the Nechalacho FS. The alkali cracking process enables recovery of 90% of the heavy rare earth elements (“HREE”) in the flotation concentrate, compared to 52% recovery contemplated in the Nechalacho FS using the sulphuric acid bake process. In addition, the alkali cracking process allows for the recovery of zirconium in a form for which there are established markets.

Optimization of the alkali cracking process flowsheet is substantially complete except for finalizing certain details around reagent recovery and recycling. Work here has indicated an 80% reduction in hydrochloric acid, 90% reduction in magnesium oxide and almost 100% reduction in calcium carbonate consumption compared to the Nechalacho FS could be achievable along with associated sustainability benefits. The new potential flowsheet also successfully suppresses the precipitation of cerium and separates the lanthanum, both of which dilute the value of the mixed HREE product.

The last metallurgical testwork investigations conducted for Nechalacho ended August 31, 2016, and related to the recovery of zirconium and production of marketable quality zirconium basic sulphate (“ZBS”) and zirconium oxychloride (“ZOC”) products. Reworking of the process design criteria, plant designs and cost estimates for both the Concentrator and Hydrometallurgical Plant, along with any revisions to the mine plan, are continuing to be developed internally.

A further integrated pilot plant campaign has been planned but will only proceed when funding becomes available. This is designed to fully evaluate process performance particularly with the incorporation of the acid/reagents recovery circuits and associated recycle streams and would include all unit operations from crushing of ore right through to the generation of a mixed rare earth precipitate. The total bulk sample of ore required for this pilot plant is approximately eight tonnes. This material is being stored in Yellowknife until such time as the funding becomes available to proceed with the pilot plant work, presently estimated at approximately \$4.0 million. There is no firm timeline for when this work will be carried out. In the meantime, the Company continues to monitor various academic research initiatives into new and more efficient rare earth extractive technology through its continuing participation in Canadian Rare Earth Elements Network.

While permits for pre-construction work are already in place, the process to obtain a Class A Water License and Land Use Permit authorizing mine construction, operation and closure activities is presently on hold but it can be accelerated again at any time with the expectation that it would then be completed in approximately 4-6 months. The Company may consider doing this in 2017 if funding is available and circumstances are favourable. Reporting continues as required under the existing permits with the Mackenzie Valley Land and Water Board. The extension of the existing exploration permit was approved during 2016 to maintain existing site facilities in preparation for future activities. Avalon continues to monitor and participate in discussions around proposed regulatory changes in the NWT that could affect the Company’s future development plans. Permits for the quarry and airstrip extensions have been allowed to lapse until such time as they are needed, and can easily be re-obtained. Avalon continues to engage with the government of the NWT on regulatory development and issues of concern for our aboriginal partners such as the development of the Caribou Management Plan.

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.

There are three mineralized zones on the property immediately north of Thor Lake with geology similar to classic pegmatite deposits, referred to historically as the R-, S- and T-Zones. It was known that these zones contain lithium-bearing minerals but no systematic mapping and sampling had been conducted prior to the October 2016 site visit. The work in this short program concentrated on the S Zone, which is exposed in outcrop and old trenches. Continuous chip samples were collected in the trenches and thirteen selected samples sent for analysis as an initial test for lithium enrichment. The remaining samples will be analyzed in the next phase of analytical work. The thirteen initial samples were submitted to ALS Global Laboratory in Yellowknife for preparation and analysis yielding encouraging results. The average Li<sub>2</sub>O content of all thirteen samples was 1.0% Li<sub>2</sub>O with two samples containing over 2% Li<sub>2</sub>O. Understanding of the overall distribution of lithium in the S Zone will improve with further analytical work and mineralogical studies.

The Nechalacho property hosts a variety of rare metals resources, any of which could become of interest for development as demand warrants. The Company continuously monitors these markets.

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 \$51,995 (2016 - \$110,574) in expenditures during the Quarter on the East Kemptville Project in Yarmouth County, Nova Scotia. Approximately 54% of these expenditures were incurred on metallurgical testwork and preliminary evaluation of the economics of a small scale development scenario involving the processing of surface ore stockpiles, 43% of the expenditures were spent on geological studies, and the balance of the expenditures were incurred on environmental studies.

The Company 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 (which was done in 2014 and renewed for 2015). Ultimately, with the completion of a feasibility study and related environmental assessment work, a form of mining lease is obtainable from the government to secure the requisite surface land rights. Negotiations with the surface rights holders toward securing full tenure to the East Kemptville site are ongoing following the completion of a detailed due diligence review at year end.

The Company first acquired a 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 ended May 31, 2015, by Order in Council, the Government of Nova Scotia approved an application for a new Special Licence reflecting the entire original mine site. The new Special Licence has a term of three years beginning February 2, 2015 and includes an obligation to incur \$5.25 million in expenditures by January 31, 2018 (of which \$3,054,077 had been incurred by May 31, 2017). It is renewable for an additional two one-year periods. The total area covered by the new Special Licence is 2,880 acres.

During the Quarter, metallurgical process optimization testwork was completed for a simple gravity flowsheet focused on recovering tin only from a low grade ore surface stockpile. Work then commenced on preparing an internal study on the economic viability of re-developing the site at this small-scale by focusing on the low-grade stockpile material. A drilling program is tentatively planned in 2017 to more systematically sample the stockpile and map the internal grade distribution in more detail. This information will be included in a future resource update.

This recent work has confirmed the potential for the small scale development scenario. The model contemplates processing of almost 6 million tonnes of surface ore stockpiles at the rate of 100 tonnes per hour (“tph”) for the recovery of a tin concentrate through a small, modular-designed gravity process plant. The model also included the processing of higher grade, near surface ore from both the Main and Baby Zone pits which extends operating life in the model to 13 years. This testwork on a simple gravity only circuit has demonstrated that a tin recovery of +/-60% is achievable by such a flowsheet. The initial concentrate produced was 44.6% tin but this was increased to 68% by flotation to remove the contained sulphides. This scenario offers the potential for near term production at a relatively low capital expenditure with positive environmental impact through reducing on-site acid generation and by taking advantage of existing tailings management facilities. Processing of the stockpiles would also contribute to the long term environmental remediation of the site.

Avalon has begun commercial discussions with several parties interested in new sources of supply of tin concentrate or interested in tin development opportunities. Samples of the stockpiled ore have been sent to one interested party and others are waiting for tin concentrate samples.

Environmental studies 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. In addition to the large scale project, a closure strategy has now also been identified for the small scale development scenario to significantly reduce the existing site environmental and associated financial liabilities through innovative management of future waste rock and tailings and through the processing of mineralized material presently stored on surface that is contributing to water treatment requirements. All future potentially acid generating waste produced will be placed 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. Additional drilling was completed by the surface rights owner to validate the stability of the coarse tailing pile and eliminate the potential need for future stabilization work during operations. Samples from the drilling will be analysed by for tin to evaluate the potential for re-processing the tailings to recover additional tin concentrates. 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.

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.

## ***New Brunswick Tin Exploration Project***

### **Mount Douglas Tin-Tungsten Property**

During the year ended August 31, 2016, the Company entered into an option agreement to earn a 100% interest (subject to a 2.0% NSR, which can be bought back for \$1.0 million) in certain mineral claims located in Charlotte County, New Brunswick. To keep the option in good standing, the Company is required to incur exploration expenditures of \$75,000 by October 28, 2016 (which had been incurred by October 28, 2016) and make cash payments totalling \$120,000 over five years (of which \$10,000 had been paid by May 31, 2017, with the next payment of \$20,000 being due by October 28, 2017).

The Company did not incur any expenditures on the Mount Douglas property during the Quarter (2016 - \$11,662).

The preliminary drilling program which totaled 350 metres in five short holes was completed on December 23, 2016. The program was designed to test three new target areas where tin-tungsten mineralization had been identified in outcrop and boulders. These targets were confirmed by sampling done by Avalon in 2015 that indicated an average of 0.25% tin in the Pocologan Zone (22

samples) and 0.18% tin (8 samples) and 0.24% tungsten (10 samples) in the Lake Anthony Brook Zone. These occurrences had never been previously drilled. The drill results showed that the highest tin concentrations are present as 0.13% Sn over 0.38 m thick in a pyrite and quartz vein at 27.5 m depth in drill hole MD-16-04, and 0.24% Sn over 1.75 metres in a quartz-pyrite vein at the top of drill hole MD-16-01 at 7.25 metres depth. No significant tungsten anomalies were intersected. One significant area of tin anomalies in boulders was not drill tested and further geological work in the summer of 2017 is planned to investigate the possible source area of the boulders which transported in nature.

Unless otherwise noted, the technical information on the Mount Douglas property has been reviewed and approved by Dr. William Mercer, PhD, P. Geo. (Ontario), P. Geo. (NS), Vice President, Exploration, who is a Qualified Person under NI 43-101.

### **Other Projects**

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

### **Corporate Social Responsibility**

During the quarter ended November 30, 2016, the Company released its fifth comprehensive Sustainability Report. The 2016 Sustainability Report is available for download on the Company's website at: <http://www.avalonAM.com>

The 2016 Sustainability Report was prepared in accordance with the Global Reporting Initiative ("GRI") Version 4 guidelines for core reporting. The 2016 Report incorporates a self-assessment of Fiscal 2016 performance and sets targets for 2017 against the applicable Mining Association of Canada's 'Toward Sustainable Mining' indicators.

In addition to the Company's safety performance, the report includes many other positive 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 Aboriginal partners to create lasting economic and social benefits in the communities. In addition to its partners in the NWT, dialogue has been initiated with the Acadia First Nation in Nova Scotia as it relates to the East Kemptville Project and with Wabaseemoong Independent Nations ("WIN") and Métis Nation of Ontario with respect to the Separation Rapids Lithium 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. A meeting was held during Q4 fiscal 2016. In recognition of its sustainability efforts, Avalon was recognized for two straight years (2015 and 2016) by *Corporate Knights'* Future 40 Responsible Corporate Leaders in Canada.

### **Administration and Other**

Corporate and Administrative expenses totalled \$768,305 during the Quarter, a 7% increase over the amount incurred during the comparative quarter in fiscal 2016 (\$718,227). The main area of increased operating expense for the Quarter was salaries and benefits.

Salaries and benefits for the Quarter increased by approximately 15% to \$426,413 compared to \$370,427 for the same quarter in fiscal 2016. This increase is primarily related to salary and benefits for an employee who had returned to work in February 2017 after parental leave, and to the increase in the provision for accrued vacation days.

Expenses on public and investor relations totalled \$125,603 compared to \$130,283 for the same quarter in fiscal 2016. Investor relations activities during the Quarter included two-day road-shows in

San Francisco-Seattle and New York and one investment conference in Scottsdale AZ. Subsequent to the end of the Quarter, the Company participated in four lithium conferences in Toronto (2), Montreal and Stuttgart, Germany as well as one additional microcap investment conference in Toronto.

Share based compensation during the Quarter totaled \$52,325 compared to \$78,936 for the same quarter in fiscal 2016. This decrease is primarily related to the decrease in the estimated fair values of the options earned during the Quarter compared to the same quarter in fiscal 2016.

In March 2017, the Company entered into a preferred share purchase agreement (the "Agreement") with an entity managed by the Lind Partners ("Lind") and issued 500 Series A1 Preferred Shares (the "Preferred Shares") at a price of \$5,000 per share for gross proceeds of \$2,500,000. Pursuant to Canadian securities laws, the securities issuable under this private placement will be subject to a hold period, which expires on July 11, 2017 (the "Hold Period").

In conjunction with this private placement, Lind received a commitment fee of \$125,000 and 6,900,000 common share purchase warrants (the "Warrants"). Each Warrant entitles the holder to purchase one common share of the Company at a price of \$0.23 per common share until March 10, 2022.

The Preferred Shares do not carry a dividend and have a redemption value that starts at \$5,000 per share and increases by \$250 per share each quarter over a 24 months period ending on March 10, 2019, to a cap of \$6,750 per share. After the Hold Period, the Preferred Shares can be converted by Lind into common shares of the Company at a price per common share equal to 85% of the five-day volume weighted average price of the common shares on the TSX immediately prior to the date that notice of conversion is given (the "Conversion Option").

Lind is also entitled to accelerate its conversion right to the full amount of the redemption value applicable at such time, or demand repayment of the applicable redemption value per share in cash, upon the occurrence of certain events as set out in the Agreement (the "Redemption Events"). The triggering Redemption Events include certain key financial and non-financial conditions, which include change of control, insolvency and liquidity conditions etc. as defined in the Agreement. These Redemption Events also limit the Company from obtaining other debt or preferred share financings that are not junior to the Preferred Shares other than certain project-related financings, as well as other at-the-market, equity lines or credit type of common share offerings, or convertible security financings where the price of the common share is not fixed at predetermined price. In addition, if the Redemption Event is a change of control event, the redemption amount will be equal to 110% of the applicable redemption amount at that time. No Redemption Event had occurred since the issuance of the Preferred Shares.

In accordance with *IAS 32 Financial Instruments: Presentation* and *IAS 39 Financial Instruments: Recognition and Measurement* ("IAS 39"), the Preferred Shares and Conversion Options have been classified as a current liability and measured as other financial liability at fair value through profit or loss ("FVTPL"), and the fair values of the Preferred Shares and the Conversion Options totalling \$2,941,176 have been recorded to the convertible redeemable preferred shares liability account on the Statement of Financial Position. The fair values of the Conversion Options of \$441,176 and other issuance costs of \$239,847 have been recorded in the Statement of Comprehensive Loss as financing transaction costs.

For the Nine Month Period, corporate and administrative expenses totalled \$2,208,794 compared to \$2,539,802 for the same period in fiscal 2016. The main areas of decreased operating expenses for the Nine Month Period were salaries and benefits, legal and related advisory fees, insurance expense, filing and transfer fees, marketing and sales expenses, and expenses on public and investor relations.

Salaries and benefits for the Nine Month Period decreased by approximately 13% to \$1,120,483, compared to \$1,284,405 for the same period in fiscal 2016. This decrease is primarily related to reduced staffing levels and to the decrease in the provision for accrued vacation days.

Legal and related advisory fees decreased by 61% to \$16,228 during the Nine Month Period compared to the same period in fiscal 2016. As part of its continuing effort to reduce costs, more routine matters and filings are now handled in-house.

Insurance expenses decreased by approximately 23% to \$98,109 compared to the same period in Fiscal 2016. This decrease is related to the reduction to the directors' and officers' liability insurance coverage from \$30,000,000 to \$20,000,000 for the 2016/2017 policy year.

Filing and transfer fees decreased by 19% to \$131,725 during the Nine Month Period compared to the same period in fiscal 2016. The decrease is primarily related to the decrease in annual listing fees paid due to the Company's move to the OTCQX Best Market from the NYSE MKT in December 2015 and cost savings achieved on mailing of the materials for the Company's 2017 AGM.

Marketing and sales related expenses decreased by \$22,369 (34%) during the Nine Month Period compared to the same period in fiscal 2016, which primarily related to the decrease in advertising sponsorships and decrease in fees paid to consultants in assisting the Company in sales and market development and government relations work. This was achieved by performing a higher portion of the work in-house.

Expenses on public and investor relations decreased by \$41,891 (10%) to \$371,132 compared to the same period in fiscal 2016. The decrease is primarily related to the decreased amount of work provided by consultants. Higher consulting fees were incurred in the same period in 2016 for investor relations activities to build investor awareness about the Company's shift in focus back to its lithium business and the Company name change which was approved by shareholders in February 2016.

Stock-based compensation decreased to \$140,174 from \$272,605 during the Nine Month Period compared to the same period in fiscal 2016. This decrease is primarily related the reversal of the share based compensation of \$106,034 previously recognized on unvested stock options that were canceled and expired, and the decrease in the estimated fair values of the options earned during the Nine Month Period compared to the same period in fiscal 2016.

On May 31, 2017, the fair value of the Company's outstanding warrants denominated in US\$ were re-measured using the Black-Scholes pricing model, which resulted in a gain of \$253,253 for the Nine Month Period (being the decrease in the estimated value of these warrants between August 31, 2016 and May 31, 2017) and a gain of \$85,097 for the Quarter (being the decrease in the estimated value of these warrants between February 28, 2017 and May 31, 2017). The changes in the estimated value of these warrants at the various valuation dates are mainly caused by the fluctuation in the trading price of the Company's common shares as at May 31, 2017 compared to August 31, 2016 and February 28, 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	2017			2016			2015	
	May 31	Feb. 28	Nov. 30	Aug. 31	May 31	Feb. 29	Nov. 30	Aug. 31
For the Quarters Ended	\$	\$	\$	\$	\$	\$	\$	\$
Revenue (Interest)	7,088	2,544	2,499	5,882	7,700	7,683	13,895	21,911
Net Loss before discontinued operations	1,312,870	568,543	640,292	704,446	1,234,913	954,982	645,304	226,209
Net Loss	1,312,870	568,543	640,292	704,446	1,234,913	954,982	645,304	226,209
Net Loss, per share, basic and diluted	0.007	0.003	0.004	0.004	0.007	0.006	0.004	0.001

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 warrants denominated in foreign currency, and financing transaction costs expensed. 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 mining 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.

As at May 31, 2017, the Company has current assets of \$1,751,593 and current liabilities of \$3,979,363. As disclosed earlier under "Administration and Other", the holder of the Preferred Shares is entitled to demand repayment of the applicable redemption value per share in cash (which totaled \$2,500,000 as at May 31, 2017) upon the occurrence of certain Redemption Events. Excluding the liability for warrants denominated in foreign currency derivative liabilities of \$158,165 and the convertible redeemable preferred shares of \$2,941,176, the Company's adjusted working capital was \$871,571 (calculated by adding back the convertible redeemable preferred shares of \$2,941,176 and the liability for warrants denominated in foreign currency of \$158,165 to the working capital deficiency of \$2,227,770). As management believes that it is unlikely that any of the Redemption Events will occur in the next twelve months and as the de-recognition of the liability for warrants denominated in foreign currency account will not require the future out flow 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. Substantially all of the Company's cash and cash equivalents are held at a major Canadian chartered bank in cashable guaranteed investment certificates bearing an annual interest rate of 1.0%. As at August 31, 2016, the Company had adjusted working capital of \$1,160,471 and cash and cash equivalents on hand of \$1,360,487.

The Company's current operating expenditures, excluding expenditures on resource property work programs, are approximately \$300,000 per month. The Company's current anticipated resource property expenditures planned to be incurred during the year ending August 31, 2017 are budgeted at approximately \$1,900,000 (excluding capitalized salaries and benefits), of which approximately \$1,383,000 had been incurred by the end of the Quarter, with approximately \$1,500,000 of these expenditures being allocated to the Separation Rapids Lithium Project, of which approximately \$1,194,000 had been incurred by the end of the Quarter.

Subsequent to the end of the Quarter, the Company completed a private placement and issued 3,400,000 flow-through common shares for gross proceeds of \$510,000 and is required to incur Canadian exploration expenses ("CEE") of \$510,000 by December 31, 2018.

The Company believes its present cash resources are sufficient to meet all of its current contractual obligations, administrative and overhead expenditures, and planned exploration programs until the end of fiscal 2017. Initiatives 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 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, with the exception of the Mount Douglas Tin-Tungsten property and its Mascarene Cobalt Prospect, 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. The Company is required to incur certain exploration expenditures on the East Kemptville Project in order to keep the new Special Licence in good standing and to maintain its option on the Mount Douglas property (as described earlier under "Exploration and Development Activities") and the Mascarene Cobalt Prospect. To keep its option on the Mascarene Cobalt Prospect in good standing, the Company is required to incur exploration expenditures of \$40,000 by August 22, 2017 (of which \$21,349 had been incurred as at May 31, 2017) and make cash payments totalling \$150,000 over five years (of which \$10,000 had been paid by May 31, 2017, with the next payment of \$25,000 being due by August 22, 2017).

A joint venture with an industry partner or end-user may represent an attractive alternative for financing the further stages in the development of the Project as well as the projects at Separation Rapids, East Kemptville, or Warren Township, 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, 2017	\$	26,333
2018	\$	315,995
2019	\$	315,995
2020	\$	105,332
2021 and thereafter	\$	-

## Off Balance Sheet Arrangements

As at May 31, 2017, 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 three and nine months ended May 31, 2017 and May 31, 2016, except for the participation by Mr. Donald Bubar (a director and the President and CEO of the Company) in the company's private placement that was completed in March 11, 2016, in which Mr. Bubar subscribed for 1,000,000 units at \$0.10 per unit were issued to Mr. Bubar. Each unit consisted of one common share and one-half of one non-transferrable common share purchase warrant. Each whole warrant entitles the holder to purchase one common share of the Company at a price of \$0.15 per share, until March 11, 2018, or if at any time following September 11, 2016, the closing price of the common shares on the TSX is \$0.25 or higher for a period of twenty consecutive trading days, 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”).

b) Compensation of key management

The remuneration of directors and other members of the Company’s senior management team during the three and six months ended May 31, 2017 and May 31, 2016 were as follows:

	Three Months Ended		Nine Months Ended	
	May 31, 2017	May 31, 2016	May 31, 2017	May 31, 2016
Salaries, benefits and directors’ fees <sup>(1)</sup>	\$ 462,615	\$ 422,181	\$ 1,305,777	\$ 1,405,696
Share based compensation <sup>(2)</sup>	42,029	73,258	247,477	276,189
	<u>\$ 504,644</u>	<u>\$ 495,439</u>	<u>\$ 1,553,254</u>	<u>\$ 1,681,885</u>

<sup>(1)</sup> Salaries and benefits of key management personnel capitalized to exploration and evaluation assets and PPE for the Quarter and for the Nine Month Period totalled \$138,648 (2016 - \$137,739) and \$428,391 (2016 - \$436,690), 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 Quarter, the Company:

- a) completed a non-brokered private placement and issued 3,400,000 flow-through common shares at a price of \$0.15 per share for gross proceeds of \$510,000. In connection with this private placement, the Company paid finder’s fees of \$30,600 and issued 204,000 non-transferrable finder’s warrants, with each finder’s warrant being exercisable to acquire one common share of the Company at a price of \$0.15 until June 12, 2019;
- b) granted an aggregate of 535,000 stock options with a weighted average exercise price of \$0.15 per share to certain employees and consultants of the Company. The weighted average contract life of these options was 4.3 years;
- c) had 925,000 stock options with a weighted average exercise price of \$1.57 per common share expired;
- d) had 1,222,500 common share purchase warrants with an exercise price of \$0.60 per share expired; and
- e) had 554,273 compensation warrants with an exercise price of US\$0.56 per common share expired.

## Financial Instruments

The Company's financial instruments consist of cash and cash equivalents, receivables, accounts payable and accrued liabilities and warrants denominated in foreign currency.

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 May 31, 2017, 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 May 31, 2017 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.

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.

As at May 31, 2017, the Company had 189,344,660 common shares issued and outstanding. Subsequent to the end of the Quarter, 3,400,000 common shares were issued pursuant to a private placement (as described earlier under "Subsequent Events"). As at the date of this MDA, the Company has 192,744,660 common shares and 500 Series A1 Preferred Shares outstanding.

### *b) Options*

As at May 31, 2017, the Company had an aggregate of 11,225,000 incentive stock options outstanding with a weighted average exercise price of \$0.54 (of which 8,145,000 were vested and 3,080,000 were unvested). Subsequent to the end of the Quarter, 535,000 options were granted, and 925,000 options had expired (as described earlier under "Subsequent Events"). As at the date of this MDA, the Company has 10,835,000 incentive stock options with a weighted average exercise price of \$0.43 outstanding.

### *c) Warrants*

As at May 31, 2017 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 November, 2016 and as at the date of this MDA is US\$0.5223;
- ii. 1,222,500 warrants with an exercise price of \$0.60 per share and exercisable until July 2, 2017;
- iii. 3,000,000 warrants with an exercise price of \$0.175 per share and exercisable until December 24, 2017;
- iv. 50,000 warrants, issued pursuant to the Accommodation Agreement, with an average exercise price of \$0.63 per share and will expire as follows: 10,000 warrants on August 9, 2017, 10,000 warrants on July 31, 2018, 10,000 warrants on

July 31, 2019, 10,000 warrants on July 31, 2020 and 10,000 warrants on August 2, 2021;

- v. 4,450,000 warrants with an exercise price of \$0.15 per share and exercisable until the earlier of March 11, 2018, or the Accelerated Expiry Date;
- vi. 1,500,000 warrants with an exercise price of \$0.20 per share and exercisable until March 29, 2018, or if at any time following September 29, 2016, the closing price of the common shares on the TSX is \$0.25 or higher for a period of twenty consecutive trading days, 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. 1,000,000 warrants with an exercise price of \$0.175 per share and exercisable until March 29, 2018, or if at any time following September 29, 2016, the closing price of the common shares on the TSX is \$0.25 or higher for a period of twenty consecutive trading days, 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. 6,900,000 warrants with an exercise price of \$0.23 per common share which are exercisable until March 10, 2022.

Subsequent to the end of the Quarter, 1,222,500 warrants with an exercise price of \$0.60 per share had expired.

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.

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

As at May 31, 2017, the Company had the following compensation warrants outstanding:

- i. 554,273 compensation warrants with an exercise price of US\$0.56 per common share, which are exercisable until June 13, 2017;
- ii. 300,000 compensation warrants with an exercise price of \$0.11 per common share, which are exercisable until the earlier of March 11, 2018 or the Accelerated Expiry Date;
- iii. 180,000 compensation warrants with an exercise price of \$0.175 per common share, which are exercisable until March 29, 2018;
- iv. 272,727 compensation warrants with an exercise price of \$0.25 per common share, which are exercisable until November 7, 2018; and
- v. 150,000 compensation warrants with an exercise price of \$0.15 per common share, which are exercisable until December 23, 2018.

Subsequent to the end of the Quarter, 554,273 compensation warrants with an exercise price of US\$0.56 per common share had expired and 204,000 compensation warrants with an exercise price of \$0.15 per common share which are exercisable until June 12, 2019 were issued as described earlier under "Subsequent Events".

## 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.

## Design of 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.

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 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.

### ***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. Management has determined that

exploration and evaluation costs incurred during the year have future economic benefits and are economically recoverable. In making this judgment, management has assessed 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 Nine Month Period.

## 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 is currently evaluating the impact of this standard and amendments on its consolidated financial statements.

### *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 is currently evaluating the impact of IFRS 15 on its consolidated financial statements.

### *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, 2016, 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 rare 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).