The Nechalacho Property, Thor Lake, NWT, Canada, is a rich polymetallic rare metals resource, with potential for economic recovery of the heavy rare earth elements (REE), neodymium, praseodymium, dysprosium, lithium, zirconium, beryllium, niobium and tantalum. Avalon initially focused on the heavy REE-rich Basal Zone deposit (2008-2013), which was the subject of the company's positive 2013 Feasibility Study.

Presence of high grade, near surface neodymium-praseodymium (Nd-Pr) and dysprosium resources in the T-Zone and Tardiff Zones of the property provide the potential for near term, small scale development to produce Nd-Pr-rich concentrates for export. In June 2019, Avalon and Cheetah Resources Pty Ltd. entered into a definitive agreement in which Cheetah would acquire ownership of the T-Zone and Tardiff Zone resources for C$5 million. Avalon will continue to manage Nechalacho work programs and retain its 3% NSR type royalty.

Environmental Studies and Permitting
Following the receipt of the new Exploration Type B Land Use Permit in June 2018, Avalon has also received approval for the extension of its existing Land Use Permit and Water License for the first year of site preparation and preliminary low impact construction activities.

Lithium Potential
- The S-Zone and North and South T-Zones at Thor Lake are all poly lithiumite ("lepidolite" - a lithium mineral) bearing.
- The North T-Zone has poly lithiumite, with 6.97% Li$_2$O predominantly in the Upper Intermediate Zone.
- The South T-Zone has reported 2.39Mt of low grade beryllium mineralization with no analyses for lithium - but abundant poly lithiumite reported.
- R and S-Zones have poly lithiumite (6.6% Li$_2$O in mineral) on surface, but not drilled. The S-Zone trench samples average 1.0% Li$_2$O.

Thor Lake is located approximately 100km southeast of Yellowknife, Northwest Territories. The site is accessible by air transport, barge in the summer and ice roads in the winter. Hay River is a port with an existing barging terminal and the Hay River railhead is accessible year round by an all-season highway.

A proposed expansion of hydro power generation and transmission capacity in the NWT potentially offers Nechalacho a low-cost alternative to diesel-generated power at the site.

Mine and processing facilities have been designed to significantly minimize impacts to water, land and air and reduce the project’s carbon footprint.

Operations Management Team
- Dave Marsh, FAusIMM (CP), SVP, Metallurgy & Technology Development
- Bill Mercer, Ph.D., P.Geo., VP Exploration
- Mark Wiseman, B.Sc., MBA, VP Sustainability
Known Mineralized Zones on Nechalacho Property

![Diagram showing known mineralized zones on Nechalacho Property]

### Previous Work

**1982-85:** Highwood Resources discovered and attempted to develop the T-Zone rare metals resource as a producer of beryllium concentrates. Also discovered rare earths and tantalum niobium mineralization in the Lake Zone.

**2005-07:** Avalon acquired the property and completed an initial compilation on the North-T deposit, which included recognition of a small, high grade, neodymium resource in the F-Subzone, averaging 6.5% Total Rare Earth Oxides including 1.5% Nd₂O₃.

**2008-13:** Discovery and definition of the Basal Zone heavy REE resource led to preparation of a positive Feasibility Study contemplating large scale production of a mixed rare earth precipitate and enriched zirconium concentrate, containing by-products tantalum and niobium. Project then put on hold following dramatic decline in REE prices.

**2018:** With rising prices for Nd-Pr, Avalon re-activated the project, completing a field program to begin assessing the near term, small scale development potential of the T-Zone and Tardiff Zones as a source of Nd-Pr rich bastnaesite concentrates. Sampling was also done in the T-Zone to begin assessing its lithium potential due to widespread occurrence of the lithium mica polythionite.

**2019:** In June 2019, Avalon and Cheetah Resources Pty Ltd. entered into a definitive agreement in which Cheetah would acquire ownership of the T-Zone and Tardiff Zone resources for C$5 million. Avalon will continue to manage Nechalacho work programs and retain its 3% NSR type royalty. A work program will be initiated focusing on the near surface T-Zone rare earth resources in September, managed by Avalon.

### REE Markets

Demand for the REE used in the manufacture of high strength permanent magnets – particularly neodymium, praseodymium and dysprosium - is increasing, and prices for these three REE in China rose by approximately 50% in 2017 before traders and Chinese producers released inventory back into the market. Concerns about security of supply of these critical elements are growing, as the trade dispute between China and the United States continues and demand for the magnet rare earths accelerates with the growing demand for electric vehicles.

### 2019-20 Plans

- Complete scoping study on East Arm-YK Road / Hydro infrastructure corridor (in progress)
- Process testwork on low-cost method for Nd-Pr concentrate recovery by ore sorting technology
- Prepare scoping study on small scale Nd-Pr development model for F-Zone and Tardiff Zones
- Confirmation drilling on F-Zone
- Re-sample old drill cores to analyze for lithium and establish initial T-Zone lithium resource estimate
- Resume permitting process and community engagement toward identifying local Indigenous business partners