# 1.0 DEVELOPER

Avalon Rare Metals Inc. ('Avalon') is a publicly traded company engaged in the exploration and development of rare metal deposits in Canada. Avalon proposes to mine, mill and produce a rare earth carbonate and oxides, zirconium, niobium and tantalum oxides from the Nechalacho deposit located on its Thor Lake Property. The proposed development is referred to as the Thor Lake Project (TLP) or "the Project".

The TLP has two proposed site components: an underground mine and flotation plant (Nechalacho Mine and Flotation Plant site), to be located at the Thor Lake Property, and a hydrometallurgical plant (Hydrometallurgical Plant site) to be located at the existing brownfields site of the former Pine Point Mine (Figure 1.0-1).

The Nechalacho Mine and Flotation Plant will have an operating life of approximately 18-20 years. The planned daily mill throughput is approximately 2,000 tpd. Camp facilities will be constructed and operated at the site for the life of the TLP. The rare metals concentrate produced at the Nechalacho Mine and Flotation Plant will be barged across Great Slave Lake for further processing at the Hydrometallurgical Plant. No permanent camp facilities will be needed at the Hydrometallurgical Plant site.

Avalon has produced this Developers Assessment Report (DAR) to support its application for a Water License and Land Use Permit for the development of the TLP. The application is in the name of Avalon Rare Metals Inc., which will also be the Project operator. The Developers Assessment Report is divided into the following sections:

1.0 Developer

2.0 Description of Existing Biophysical Environment

3.0 Description of Existing Socio-Economic Environment

4.0 Development Description

5.0 Public Consultation

6.0 Environmental Assessment

7.0 Effects of the Environment on the Development

8.0 Accidents and Malfunctions

9.0 Human Environment Assessment

10.0 Cumulative Effects Assessment

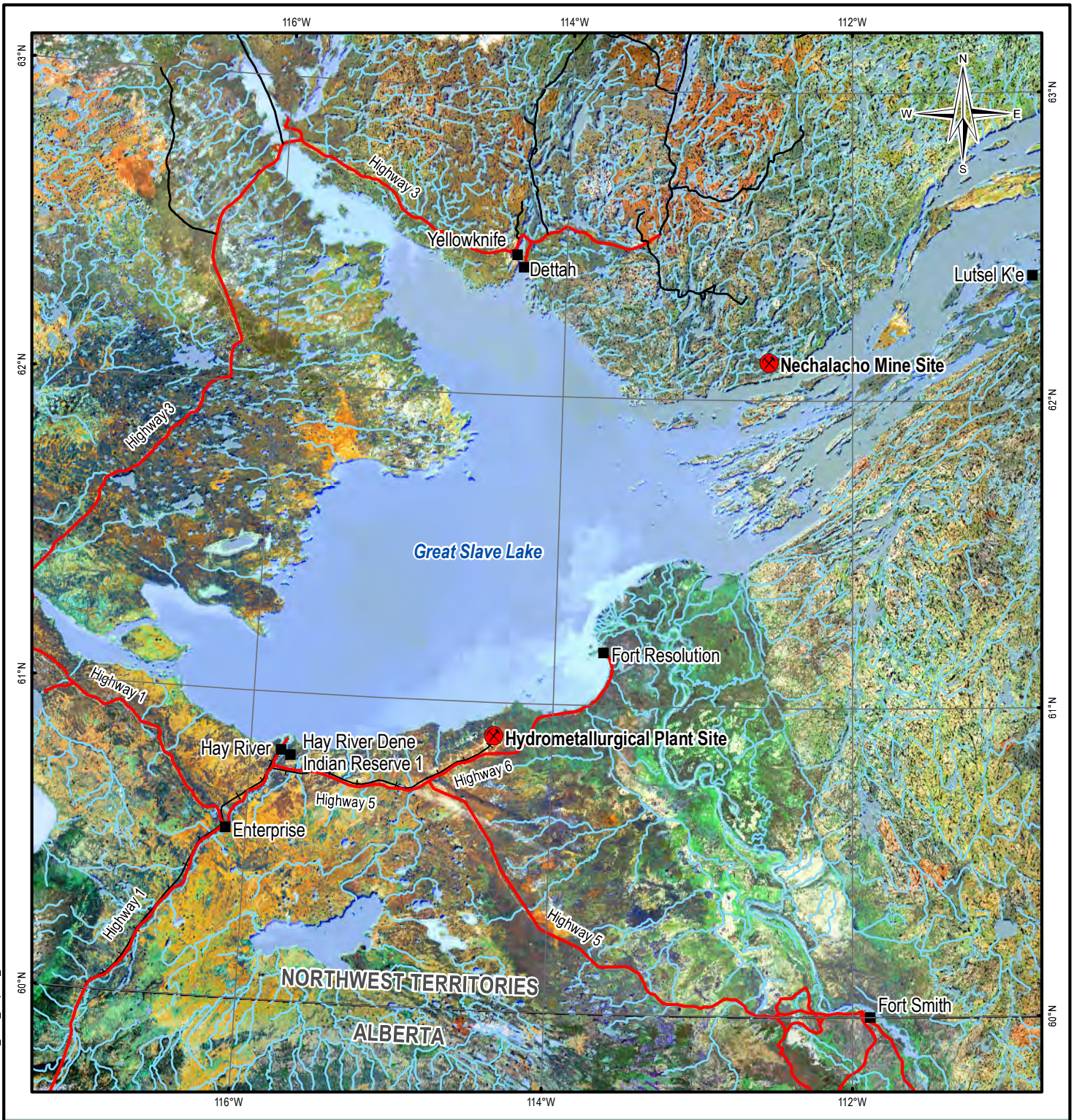
11.0 Closure and Reclamation

This DAR provides the information required for the technical review of the TLP. Avalon was assisted by EBA Engineering Consultants Ltd. (the Company's lead consultant). Other consultants that contributed to sections of the DAR included:

- G.S. Gislason and Associates Ltd. Economic Modelling

| | |
|---|---|
| • J.R. Goode and Associates Metallurgical Consulting | Mine and Metallurgical Processing |
| • Knight-Piésold Consulting | Hydrology and Hydrogeology |
| • RWDI Consulting Engineers and Scientists | Air Quality Assessment |
| • SENES Consultants Limited | Ecological and Human Health Risk Assessment |
| • SGS Canada Inc. | Mineralogy |
| • Stantec | Environmental Baseline Studies |

The report identifies the technical aspects and environmental interactions the Project may have during the design, construction, operations and eventual closure phases. It also delineates the mitigation measures proposed to effectively address these matters. The appendices provide additional technical information collected to support the DAR.




## LEGEND

- Site Location
- Community
- Road
- Winter Road
- Railroad
- Watercourse
- Waterbody

**NOTES**

Base data source: ESRI Data Maps

ISSUED FOR USE

# THOR LAKE PROJECT

## Site Locations

| | | | |
|---|---|---|---|
| PROJECTION: NWT Lambert | | DATUM: NAD83 | |
| Scale: 1:2,000,000 | | | |
| 40 20 0 40 Kilometres | | | |
| FILE NO.: V15101007_DAR_Map001_SiteLocation.mxd | | | |
| PROJECT NO.: V15101007.006 | DWN: SL | CKD: RH | REV: 1 |
| OFFICE: EBA-VANC | DATE: May 17, 2011 | | |

AVALON RARE METALS INC.

EBA Engineering Consultants Ltd.

**Figure 1.0-1**

Q:\Vancouver\GIS\ENGINEERING\V151\V15101007_ThorLake\Maps\006_DAR\V15101007_DAR_Map001_SiteLocation.mxd

## 1.1 CORPORATE OVERVIEW

Avalon is a Canadian mineral exploration and development company that is listed on the Toronto Stock Exchange in Canada and on the NYSE Amex in the United States. The Company seeks to build shareholder value by becoming a diversified producer and marketer of rare metals and minerals and expanding the markets for its mineral products. Avalon's Capital structure is listed in Table 1.1-1.

**TABLE 1.1-1: AVALON'S CAPITAL SHARE STRUCTURE**

| **Canada – TSX:AVL**<br>**United States– NYSE Amex:AVL** | **Frankfurt- OU5** |
|---|---|
| Shares Outstanding | 94,054,915 |
| Fully Diluted | 103,908,970 |
| Market Capitalization | US $815 million (S.O. @ $8.70) |
| Recent Price Range | US $7.30 - $10.11 |
| 52 Week High/Low | US $10.11 – C $1.89 |
| Cash Reserves | C $32 million (No debt) |
| Insider Share Position | 4.1 million shares (4.5%) |
| Institutional holdings | John Hancock, TDAM, Global X, Manulife, AGF |
| (est. 30-40%) | Encompass, Van Eck, Cantara, Sentry, Chilton |
| Employees | 20 (including contract staff) |

Avalon operates exclusively in Canada with a primary focus on the rare earth elements (REE), and other rare metals and minerals including tin, lithium, tantalum, niobium, cesium, indium, gallium, zirconium and calcium feldspar. By definition, REE are the lanthanide series of elements (atomic numbers 57-71), whereas the term "rare metals" is a more general "umbrella" term that includes the REE as well as other rare metals including those named above.

The Company is in the process of exploring or developing three of its six mineral resource properties. All active projects (Thor Lake, Separation Rapids, and East Kemptville) are rare minerals or rare metals properties that are at an advanced stage, with identified reserves and/or mineral resources that are potentially economic, provided that sales contracts with customers can be secured and project financing arranged. Thor Lake is the Company's most advanced project.

The results of a positive Prefeasibility Study (PFS) on the development potential of the Nechalacho REE deposit on the Thor Lake Project were announced on June 21, 2010. A technical report was filed on July 27, 2010, that was subsequently amended and re-filed in September, 2010 in conjunction with a prospectus filing. The latest updated NI 43-101 compliant resource estimate for the deposit was disclosed on January 27, 2011 and a bankable feasibility study, targeted for completion in 2012, is the Company's top priority and primary focus.

Avalon has adopted the Principles and Guidelines for Responsible Exploration being developed by the Prospectors and Developers Association of Canada (PDAC), as a policy of the Company and made Corporate Social Responsibility (CSR) a Company priority. Avalon applies these principles throughout its operations, particularly with respect to its environmental and community engagement practice on the Thor Lake Project. Avalon is also a member of the Mining Association of Canada (MAC) and has committed to following the principles of socially responsible mining through MAC's "*Toward Sustainable Mining*" initiatives.

Industrial demand for the rare metals is growing due to their importance in an expanding array of applications in technology related to energy efficiency and a cleaner environment. Rare metals supplies are constrained, especially for the rare earth elements where China provides approximately 95% of the world's primary supply. Recent policy directives announced by the Chinese government are dictating reductions in exports of unprocessed rare earth elements leading to concern about security of supply in major REE consuming countries such as Japan and the United States. Media coverage and independent analyst commentary of this issue continues to stimulate considerable interest in REE amongst investors.

## 1.2 CORPORATE GOVERNANCE

Avalon has developed its Vision and Mission statements which drives the Corporations current and future initiatives. These statements, developed by the executive management team and approved by the Board of Directors, are as follows:

- Vision: To be the leading integrated supplier of technology metals and minerals for a more sustainable world.
- Mission: To maximize shareholder value by being the first to market with a new supply of heavy rare earths, by providing superior customer service and being a leader in socially responsible mineral production.

Avalon's Board of Directors (the Board) is responsible for the supervision of the management of the Company and for approving the overall direction of the Company in a manner that is in the best interests of the Company and its stakeholders. The Board will participate fully in assessing and approving strategic plans and material prospective decisions proposed by management. To ensure that the principal business risks that are borne by the Company are appropriate, the Board will receive periodic reports from management on the Company's assessment and management of such risks. The Board will regularly monitor the financial performance of the Company, including receiving and reviewing detailed financial information contained in management reports.

The Board will monitor the activities of the senior management through regular meetings and discussions amongst the Board and between the Board and senior management. The Board will hold regular meetings at least four times per year. Additional meetings will be held to address special items of business.

It is a requirement of these Principles and Guidelines that:

- the Board adopt a Corporate Communications Policy;
- the Board adopt an Audit Committee Charter; and
- the Board directly and through its Audit Committee, regularly assess the integrity of the Company's internal control and management information systems.

It is a requirement of these Principles and Guidelines that:

- the Board determine the status of each director as an "independent" director, based on the meaning of "independence" in National Instrument 58-101 Disclosure of Corporate Governance Practices;
- the Board be constituted with a majority of directors who are independent;
- the Board examine its size with a view to determining the impact of the number of directors upon the effectiveness of the Board;
- the Board establish procedures to enable the Board to function independently of management; and
- the Board implement a system which enables an individual director to engage an outside advisor at the expense of the Company in appropriate circumstances.

Principles and Guidelines relating to committees of the Board of Directors require that:

- committees of the Board generally be composed of independent directors;
- the Board expressly assume responsibility, or assign to a committee of directors responsibility, for the development of the Company's approach to governance issues;
- the Audit Committee be composed of a majority of independent directors; and
- appoint a Compensation and Nomination Committee which will review, report and, where appropriate, provide recommendations to the Board on proposing new nominees to the Board and other succession planning matters and, in conjunction with the Board, will monitor the performance and compensation of senior management, and will assess directors on an on-going basis.

The mandate of the Chief Executive Officer ("CEO") is to be responsible for managing the day-to-day operations of the Company, which includes the supervision of the senior management team, the Company's outside consultants and exploration staff. The CEO is responsible for the implementation of the Company's corporate objectives and the resolutions of the Board and the appropriate and timely feedback of the results of these efforts.

These Principles and Guidelines regarding the recruitment of new directors and assessment of Board performance require that, in conjunction with the Compensation and Nomination Committee:

- the Board implement a process for assessing the effectiveness of the Board and the committees of the Board and the contribution of individual directors;
- the Company provide an orientation and education program for new directors, and
- the Board review the adequacy and form of compensation of directors and ensure that the compensation realistically reflects the responsibilities and risks involved in being an effective director.

## 1.3 ENVIRONMENTAL AND SAFETY POLICY

### 1.3.1 EHS Policy

Avalon Rare Metals Inc. (the 'Corporation') recognises that maintenance of environmental quality is vital to the Corporation's existence, progress, and continued development. The Corporation will maintain high environmental standards limited only by technical and economic feasibility. The Corporation will take positive action to protect the safety of its workers, conserve natural resources, and minimize the impact of its activities on the environment through diligent application of appropriate technology and responsible conduct at all stages of exploration, mine development, mining, mineral processing, decommissioning, and reclamation.

The purpose of Avalon Rare Metals Inc.'s Safety and Environmental Policy is to provide a measurable framework for the performance of the Corporation's activities in an environmentally responsible manner, ensuring compliance by the Corporation and its employees with all applicable environmental regulations and commitments.

Avalon Rare Metals Inc. will:

- Obey the law and conduct all business in an ethical manner;
- Evaluate, plan, construct, and operate all projects and facilities to reduce adverse environmental impacts and to meet or exceed applicable environmental laws, regulations, and standards. In the absence of applicable regulations, the Corporation will apply cost effective best management practices to protect the environment. Require managers of all projects and operations to adhere to the Corporation Environmental Policy and to identify, evaluate, and minimize risks to the environment;
- Continuously review environmental achievements and technology to seek and implement methods for further improvement;
- Require all operations to have site specific emergency response plans which meet or exceed all applicable regulations;
- Conduct regular environmental, health and safety preparedness and emergency response plans to verify compliance with the Corporation's policy and applicable regulations; Identify revisions or improvements to current practices in order to minimize environmental impacts. Report findings regularly to the Board of Directors;
- Educate employees in environmental matters and responsibilities relating to performance of their assigned tasks;

- Foster communication with shareholders, the public, employees, indigenous people and government to enhance understanding of environmental issues affecting the Corporation's activities;
- Work pro-actively with government and the public to define environmental priorities. Participate in the development of responsible laws for the protection of the environment; and
- Allocate sufficient resources to meet the Corporation's environmental goals. Annually assess the projected costs of decommissioning and reclamation of appropriate amount to ensure that there will be sufficient cash reserves to pay for these costs upon closure.

Avalon's health and safety policies were approved and adopted by the Board of Directors on the 18th day of July, 2006.

### 1.3.2 Environmental Responsibility

Prior to Avalon acquiring the Thor Lake property, Highwood Resources Ltd. (Highwood) held a land use permit that allowed for clean-up, maintenance and exploration on the property. The permit expired on October 26, 2002.

Past exploration on the Thor Lake property included underground bulk sampling, drilling, and trenching. Accordingly, there is little surface disturbance from exploration activities. Apart from a trailer camp, miscellaneous buildings, a 60,000 gallon six tank farm, a tent camp, and a core storage area located on the property, there are no other environmental liabilities left by past exploration activities. The diesel fuel remaining in the tank farm has been consumed during Avalon's recent exploration activities and the tanks will be re-purposed for future operations. Parts of the trailer camp have been removed, while others have been refurbished and utilized for current camp and office facilities. A recent reclamation campaign removed over 6,000 cubic metres of historic waste piles for use in Avalon's completed airstrip.

The company has undertaken extensive general clean-up of material left from previous exploration utilizing First Nations labour. Access to the underground workings has been barricaded and the mine workings allowed to flood. Warning fencing has also been installed around the ramp entrance.

### 1.3.3 E3 Plus Principles

Avalon has adopted The Prospector and Developers Association of Canada's (PDAC) E3 Plus: A Framework for Responsible Exploration. Phase one of this Framework is "Adopt Responsible Governance and Management" and as a participant of this effort, Avalon ensures that project personnel have knowledge, awareness and training in all corporate policies and procedures. Avalon requires all those in positions of authority or management to have read these corporate policies and procedures.

In 2010, Avalon was a co-recipient of PDAC's Environment and Social Responsibility Award for its past initiatives, actions, and commitments to becoming a socially responsible development Company.

To read more about the PDAC's E3 Plus: A Framework for Responsible Exploration, please go to. http://www.pdac.ca/e3plus/

### 1.3.4 Mining Association of Canada (MAC)

In 2010, Avalon became a member of the Mining Association of Canada and as such, must comply with their guiding principles "*Towards Sustainable Mining*" established in 2004. As a member of the Mining Association of Canada, Avalon's role is to responsibly meet society's needs for minerals, metals and energy products. To achieve this Avalon is engaged in the exploration, discovery, development, production, distribution and recycling of these products.

Avalon believes that it's opportunities to contribute to and thrive in the economies in which we operate must be earned through a demonstrated commitment to sustainable development. Accordingly, our actions must demonstrate a responsible approach to social, economic and environmental performance that is aligned with the evolving priorities of our communities of interest. Our actions must reflect a broad spectrum of values that we share with our employees and communities of interest, including honesty, transparency and integrity. And they must underscore our ongoing efforts to protect our employees, communities, customers and the natural environment.

Avalon is committed to demonstrating leadership worldwide by:

- Involving communities of interest in the design and implementation of our Towards Sustainable Mining initiative;
- Proactively seeking, engaging and supporting dialogue regarding our operations;
- Fostering leadership throughout our companies to achieve sustainable resource stewardship wherever we operate;
- Conducting all facets of our business with excellence, transparency and accountability;
- Protecting the health and safety of our employees, contractors and communities;
- Contributing to global initiatives to promote the production, use and recycling of metals and minerals in a safe and environmentally responsible manner;
- Seeking to minimize the impact of our operations on the environment and biodiversity, through all stages of development, from exploration to closure;
- Working with our communities of interest to address legacy issues, such as orphaned and abandoned mines; and
- Practicing continuous improvement through the application of new technology, innovation and best practices in all facets of our operations.

In all aspects of our business and operations, Avalon will:

- Respect human rights and treat those with whom we deal fairly and with dignity;
- Respect the cultures, customs and values of people with whom our operations interact;

- Recognize and respect the unique role, contribution and concerns of Aboriginal peoples (First Nations, Inuit and Métis) and indigenous peoples worldwide;
- Obtain and maintain business through ethical conduct;
- Comply with all laws and regulations in each country where we operate and apply the standards reflecting our adherence to these Guiding Principles and our adherence to best international practices;
- Support the capability of communities to participate in opportunities provided by new mining projects and existing operations;
- Be responsive to community priorities, needs and interests through all stages of mining exploration, development, operations and closure;
- Provide lasting benefits to local communities through self-sustaining programs to enhance the economic, environmental, social, educational and health care standards they enjoy.

MAC draws on the 1987 Brundtland Commission definition of sustainable development identified as "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*." The term communities of interest to include all of the individuals and groups who have or believe they have an interest in the management of decisions about Avalon's operations that may affect them. This includes: employees, contractors, Aboriginal or indigenous peoples, mining community members, suppliers, customers, environmental organizations, governments, the financial community, and shareholders.

### 1.3.5 Jantzi Sustainalytics

Avalon received from Jantzi Sustainalytics (Jantzi) the "*Sustainability Intelligence Review*" which Jantzi had been contracted to prepare in order to evaluate the Company's current sustainability practice and identify areas where its performance can be improved. Jantzi is a Toronto-based firm recognized as a leading global provider of environmental, social and governance (ESG) research and analysis for public companies and investors. The report was completed by September, 2010, and the results reported in a news release dated September 27, 2010. Jantzi determined that the Company's overall environmental, social and governance performance was above average and provided a number of recommendations of how performance could be further improved, which the Company has been acting on.

Jantzi maintains the Jantzi Social Index or "JSI" of 60 TSX-listed companies as well as an index of "CleanTech" companies and partnered with RBC Asset Management to launch three sustainability-oriented equity investment funds. The Company seeks to achieve a high level of performance with respect to its sustainability practice and then have it independently verified to attract the interest of the growing number of socially responsible investors around the world. The Sustainability Intelligence Review was intended, in part, to provide the Company with the guidance necessary to help it achieve this objective.

## 1.4 PROPERTIES

In addition to the Thor Lake Property, Avalon has ownership of four other properties in Canada and two other projects of interest. Although there is great potential with these other projects, Avalon remains primarily focused on developing its Nechalacho deposit.

### 1.4.1 Thor Lake Property

Avalon's 100% owned Thor Lake Property is located at Thor Lake in the Mackenzie Mining District of the Northwest Territories, about 5 km north of the Hearne Channel of Great Slave Lake and approximately 100 km southeast of the City of Yellowknife. The Property is shown on National Topographic System (NTS) map sheet 85I/02 at approximately 62°06'30"N and 112°35'30"W (6,886,500N, 417,000E – NAD83) (Figure 1.0-1).

The Property is remote but accessible year-round via helicopter from Yellowknife and seasonally by barge from Yellowknife or Hay River. The Property is also seasonally accessible via ice road from Yellowknife and by float/ski/wheeled plane.

The Thor Lake Property hosts six rare earth metal bearing mineral deposits: the Nechalacho deposit, North T Zone, South T Zone, S Zone, R Zone and Fluorite Zone. The focus of the TLP is the Nechalacho deposit. The Nechalacho deposit is the largest mineralized body on the property. It covers an approximate area of two square kilometres.

### 1.4.2 Separation Rapids

The Separation Rapids property is host to one of the largest rare metal pegmatite deposits in the world. Known as the "Big Whopper Pegmatite" (BWP), it is only the fourth example in the world of a rare metal pegmatite with the size required to be of major economic importance and only the second to be enriched in the rare lithium mineral called petalite. The deposit is a potential source of lithium minerals for use in the glass and ceramics industry and specialty composite materials, and is also a potential source of lithium chemicals for the growing rechargeable battery market. There is additional potential for production of by-product tantalum and rubidium minerals and a pure form of sodium feldspar.

The Separation Rapids property consists of ten mineral claims totalling 90 claim units, covering approximately 3,600 acres (155 ha) in the Paterson Lake Area, Kenora Mining Division, Ontario. These claims are owned 100% by Avalon. The original vendors retain a 2.0% Net Smelter Return (NSR) royalty interest in the property, of which 1.0% can be bought back at any time for $1,000,000.

The Separation Rapids property is situated approximately 70 km by road north of Kenora, Ontario and is directly accessible via a private road. The main line of the Canadian National Railway passes through the village of Redditt, just 50 km by road south of the Separation Rapids property. The property lies within the traditional land use area of the Wabaseemoong Independent Nations of Whitedog, Ontario, an Aboriginal community located approximately 35 km southwest of the property.

Complex-type pegmatites are found in many areas of the world and are economically important as resources for the rare metals, including lithium, tantalum, cesium and rubidium. Except for the producing Tanco (Manitoba), Bikita (Zimbabwe) and Greenbushes (Western Australia) mines, most complex-type pegmatites are too small to be profitably mined.

The geological mapping and diamond drilling work done by Avalon have delineated the Big Whopper pegmatite system over a strikelength exceeding 1.5 km, with widths ranging from 10 m to 80 m and to a vertical depth of close to 300 m, where it remains open.

The 1997-98 drilling program delineated a 43-101 compliant indicated petalite resource of 8.9 million tonnes and an inferred petalite resource of 2.7 million tonnes, both grading 1.34% $Li_2O$, 0.007% $Ta_2O_5$ and 0.30% $Rb_2O$. These resources are delineated over a strikelength of 600 m, to a maximum vertical depth of 250 m and remain open for expansion both to depth and along strike. The lithium and rubidium grades are consistent with a petalite content averaging 25±5% and an Rb-K-feldspar content averaging 10 to 15%.

The mineralized zone is well exposed at surface in a low dome-shaped hill, where it averages 55 m in width over a 400 m strikelength. This part of the deposit will be readily amenable to mining by low-cost quarrying methods. A conceptual open pit designed for the pre-feasibility study by Micon International contains a probable reserve of 7.72 million tonnes grading 1.4% $Li_2O$, (NI 43-101 audited) which is the reserve used for present planning purposes.

Water for mineral processing and other needs is available in abundance in the Project area. The nearest hydroelectric power generating station is located at Whitedog Falls. The transmission line comes within 30 km of the Separation Rapids property.

### 1.4.3 East Kemptville

The 100% owned East Kemptville Polymetallic Tin/Rare Metals Project is located approximately 45 km northeast of Yarmouth, in Yarmouth County, southwestern Nova Scotia, in the vicinity of the former East Kemptville Tin Mine. Highway #203, which connects the Town of Yarmouth to the southwest with the Town of Shelburne to the east, passes a short distance to the northwest of the exploration licences.

The property consists of ten (10) contiguous exploration licenses and a Special License comprising 15,480 acres (6,264.5 ha) and 880 acres (356.1 ha) respectively. The Special License was granted by the Province of Nova Scotia in August of 2006 over part of the former mine site and since that time, various exploration licenses have been staked to cover potential regional exploration targets identified in the company´s compilation efforts.

The Company was granted the special exploration licence to search and prospect for all minerals except for coal, salt, potash and uranium within 22 claims totalling approximately 880 acres (356.1 ha).

### 1.4.4 Warren Township

The Warren Township Calcium Feldspar Project is an advanced mineral development opportunity located near the Village of Foleyet, 100 km west of Timmins, Ontario. The project consists of three mining claims totalling 728.4 ha staked by Avalon in 2002, that are 100% owned by the Company. The three claims cover a portion of the Shawmere Anorthosite Complex hosting a significant resource (in excess of 800,000 tonnes, not yet audited for compliance with NI 43-101) of a high purity anorthosite consisting of up to 98% high calcium plagioclase feldspar.

Anorthosite is an unusual mafic igneous intrusive rock consisting of greater than 90% plagioclase feldspar. Previous work has demonstrated that this material can be processed to produce a high quality calcium feldspar raw material for the manufacture of reinforcing glass fibre and other industrial products such as mineral fillers. The location of the property near both road and rail transportation infrastructure and its proximity to markets in southern Ontario and the northeastern U.S. offers the potential for development of a low-cost, highly profitable industrial minerals operation.

The project site is typical of much of northeastern Ontario and the Canadian Shield. The property is relatively flat, with the anorthosite outcrops on the property forming local topographic highs. The average elevation on the property is approximately 390 m above sea level. Within the claim boundary, outcrop exposure is approximately 40%, with the area of immediate mining potential being approximately 80% exposed. The Carty-Warren road overlies the centre of the deposit area.

### 1.4.5 Lilypad Lakes

The Lilypad Lakes project consists of 14 claims, totalling 3,107.9 ha, covering a field of tantalum and cesium rich pegmatites, and located 150 km northeast of Pickle Lake, Ontario near the Aboriginal community of Fort Hope (Eabametoong First Nation). The claims were staked by the Company between January, 1999 and October, 2000 and are 100% owned by the Company with no underlying royalties.

The property is presently only readily accessible by air. A camp was established on Lilypad Lakes for the field programs and was serviced by float-equipped aircraft from Pickle Lake. In the winter, the property is accessible from Fort Hope by snowmobile and this community is accessible for a brief period in the winter by an ice road from Pickle Lake. Longer term, there have been proposals to build an all-weather road from Armstrong to Fort Hope to facilitate access for logging companies as well as access to the community. This road could potentially pass quite close to the Lilypad Lakes claims.

### 1.4.6 Other Projects

#### 1.4.6.1 Wolf Mountain

The Wolf Mountain platinum-palladium project is located approximately 90 km northeast of Thunder Bay, Ontario and covers two Proterozoic aged layered ultramafic intrusions favourable for the occurrence of platinum-palladium plus copper-nickel deposits. The Wolf Mountain project consists of two properties: The Seagull property and the Disraeli Lake

property, covering a total combined area of 12,383.4 ha. The project has been inactive since July 2002 due to a lack of financing.

In November 2003, Avalon elected to sell its 40% working interest in the project to joint venture partners, Eastwest Resource Corporation ("EWR") and Canadian Golden Dragon Resources Ltd. ("CGD"), for $20,000 cash and a carried 0.4% NSR royalty interest in the two properties. The joint venture can purchase this royalty interest from the Company at any time for $1,000,000 cash.

EWR and CGD continue to explore the property for platinum-palladium-gold ("Pt-Pd-Au") deposits and in 2006 reported that drill hole WM05-17 intersected 0.44 m grading 7.90 g/t Pt+Pd+Au (3.69 g/t Pt, 3.99 g/t Pd and 0.21 g/t Au) within a broader intercept of 1.72 m grading 3.25 g/t Pt+Pd+Au, but have not yet reported a resource estimate.

#### 1.4.6.2 East Cedartree

The Company holds a 2% Net Smelter Return ("NSR") royalty interest in five claims, comprising part of the East Cedartree gold property located 70 km southeast of Kenora, Ontario. The titleholder to the claims, Metalore Resources Ltd. ("Metalore"), can re-purchase a 1% NSR from the Company at any time for $1.0 million cash. Avalon sold its title to the claims to Metalore in 2002 for $50,000 cash and 10,000 shares of Metalore.

Metalore has carried out several diamond drilling programs since the fall of 2002 to follow up on encouraging results from previous drilling by Avalon in 1998. The most recent program, conducted in 2006-07, reported several significant gold intersections including 104.3 g/t gold over 4.3 m, but Metalore has not yet reported a resource estimate for this mineralized gold zone.

## 1.5 MINERAL CLAIMS, LEASES AND ROYALTY AGREEMENTS

The Thor Lake property consists of five contiguous mineral leases (totalling 4,249 ha, or 10,449 acres) and three claims (totalling 1,869 ha, or 4,597 acres) (Figure 1.5-1). The claims were staked in 2009 to cover favourable geology to the west of the mining leases. Pertinent data for the mining leases are shown in Table 1.5-1, while the mineral claims data are shown in Table 1.5-2.

**TABLE 1.5-1: MINERAL LEASES SUMMARY – THOR LAKE PROJECT**

| Lease Number | Area (ha) | Legal Description | Effective Date | Expiration Date |
|---|---|---|---|---|
| 3178 | 1,053 | Lot 1001, 85 I/2 | 22/05/1985 | 22/05/2027 |
| 3179 | 939 | Lot 1000, 85 I/2 | 22/05/1985 | 22/05/2027 |
| 3265 | 367 | Lot 1005, 85 I/2 | 2/3/1987 | 2/3/2029 |
| 3266 | 850 | Lot 1007, 85 I/2 | 2/3/1987 | 2/3/2029 |
| 3267 | 1,040 | Lot 1006, 85 I/2 | 2/3/1987 | 2/3/2029 |
| **TOTAL** | **4,249** | | | |

| TABLE 1.5-2: MINERAL CLAIMS SUMMARY– THOR LAKE PROJECT | | | |
|---|---|---|---|
| **Mineral Claim Number** | **Mineral Claim Name** | **Claim Sheet Number** | **Mining District** |
| K12405 | Angela 1 | 8512 | Mackenzie |
| K12406 | Angela 2 | 8512 | Mackenzie |
| K12407 | Angela 3 | 8512 | Mackenzie |

The mining leases have a 21-year life and each lease is renewable in 21-year increments. Annual payments of $2.47/ha ($1.00 per acre) are required to keep the leases in good standing. Avalon owns 100% of all of the leases subject to various legal agreements described below.

Two underlying royalty agreements exist on the Thor Lake property: the Murphy Royalty Agreement and the Calabras/Lutoda Royalty Agreement, both of which originated with Highwood, the original developer of the property.

The Murphy Royalty Agreement, signed in 1977, entitles J. Daniel Murphy to a 2.5% Net Smelter Return (NSR) payments. The Murphy Royalty Agreement applies to the entire Thor Lake property and the royalty is capped at an escalating amount indexed to inflation. There is a provision in the Murphy Royalty which would permit Avalon to purchase the royalty at the commencement of production. The Calabras/Lutoda Royalty Agreement, signed in 1997, entitles Calabras (Canada) Ltd. to a 2% NSR and Lutoda Holding Ltd. to a 1% NSR.

## 1.6 REQUIRED PERMITS, LICENSES AND AUTHORIZATIONS

Under the *Mackenzie Valley Land and Water Resources Act* and Regulations, the Mackenzie Valley Land and Water Board (MVLWB) administers land use permits and water licenses. The *Mackenzie Valley Resource Management Act* (MVRMA) allows local and particularly Aboriginal input into land and water use permitting. The MVRMA establishes a three-part environmental assessment process:

- Preliminary screening;
- Environmental assessment;
- Environmental impact review (panel review, if necessary).

For a production permit, the Thor Lake Project will require preliminary screening, as well as an environmental assessment.

Subsequent to the acquisition of the property, and completion of community engagement meetings, Avalon applied to the MVLWB for an exploration permit. A two year permit was granted effective July 2007. It was under this permit that the drilling programs in 2007 to the present were conducted. The permit was renewed in July 2009 for a further two years and an amendment granted including the operation of two diamond drills.

On April 23, 2010, Avalon filed a detailed Project Description Report (PDR) with the MVLWB as the first step in its application for a Type A Land Use Permit and Type A Water License. On June 11, 2010, the Company was advised by the Mackenzie Valley

Environmental Impact Review Board (MVEIRB) that, as expected, the permit application would be referred for environmental impact assessment which is underway. As of October 26, 2010, scoping sessions have been completed in the communities of Yellowknife, Dettah, Lutsel K'e, Fort Resolution and Hay River. On November 26, 2010, MVEIRB submitted its Draft Terms of Reference (ToR) with the comment period extended through January 7, 2011. On February 15, 2011, Avalon received MVEIRB's Final Terms of Reference, which will serve as the basis for the Developers Assessment Report (DAR) required for the assessment process. Additional steps in the process include, but not limited to, information requests, technical sessions and public hearings.

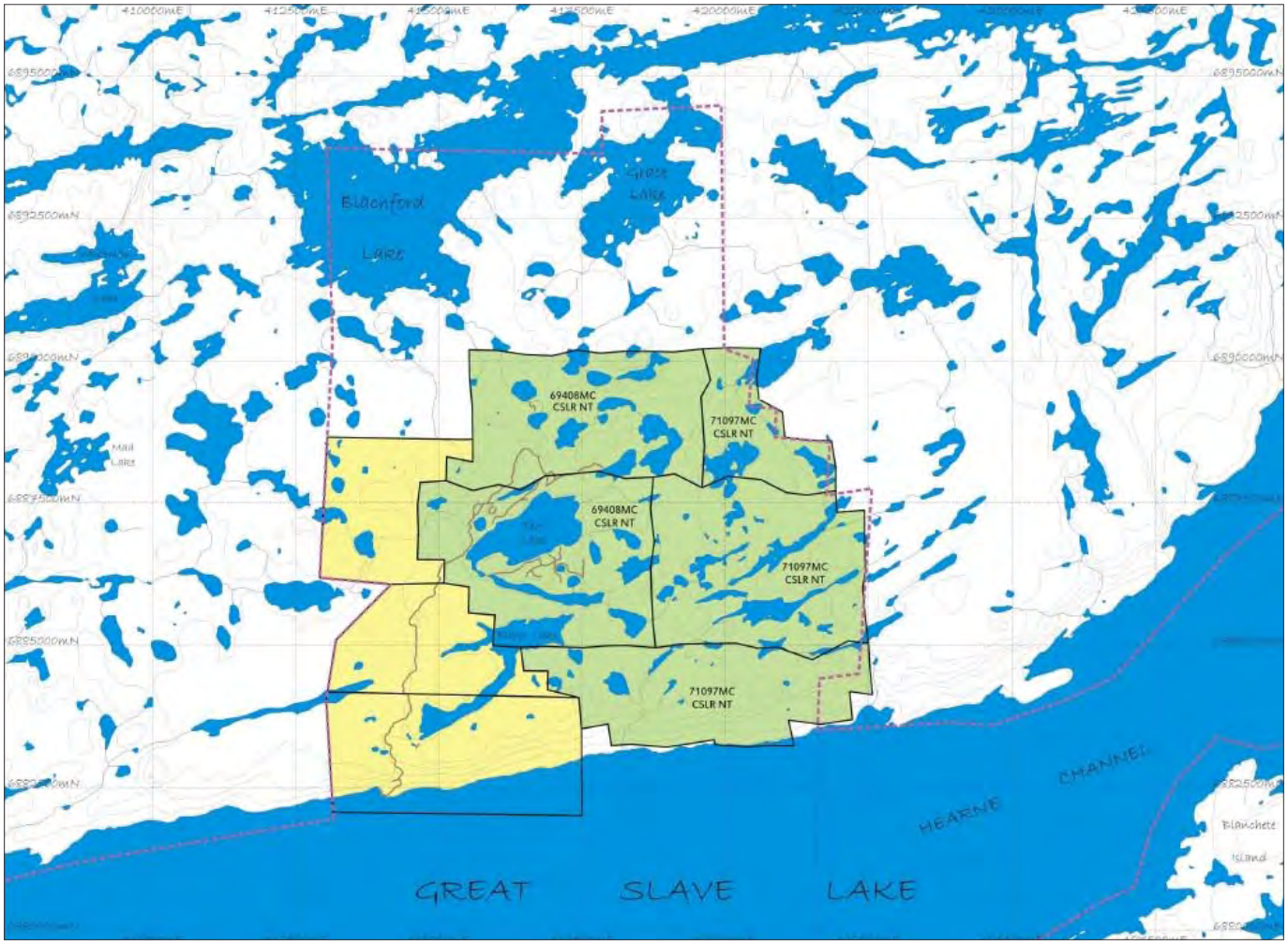
Upon completion of the Environmental Assessment process, the MVEIRB will issue its final report and recommendations to the Minister of Indian and Northern Affairs Canada. Following Ministerial approval, the process reverts back to the MVLWB to determine the conditions for the Type A Land Use Permit and Type A Water License.

Because the Thor Lake Project will be processing minerals at both Nechalacho deposit located at Thor Lake and the Hydrometallurgical Plant located at the historic Pine Point Mine, Avalon will be required to obtain surface leases issued through Indian and Northern Affairs Canada.

The construction and operation of the TLP (all components) will require a Type A Water License for all water uses, and a Type A Land Use Permit.

Other environmental permits/approvals anticipated to be required for the TLP include:

- A *Navigable Waters Protection Act* (NWPA) approval for the seasonal docking facilities; and,
- Letters of Advice from the Department of Fisheries and Oceans (DFO) under the federal *Fisheries Act* and/or a Section 35.(2) Fisheries Authorization.




## LEGEND

- Akaitcho land withdrawl
- Avalon mining claims
- Avalon mining leases
- Road

NOTES

Source: Avalon Base Metals Inc.

0 3500
METRES

ISSUED FOR USE

CLIENT

AVALON RARE METALS INC.

EBA Engineering Consultants Ltd.

# THOR LAKE PROJECT

## Claim Location Map

| PROJECT NO. | DWN | CKD | REV |
|---|---|---|---|
| V15101007.006 | KW | TP | 0 |
| OFFICE: EBA-VANC | DATE: April 7, 2011 | | |

**Figure 1.5-1**

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