

## PLAIN ENGLISH SUMMARY

Avalon Rare Metals Inc. ('Avalon') is a publicly traded company involved in the exploration and development of rare metal deposits in Canada. 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 about 100 km southeast of Yellowknife.

### Translation

*Avalon Rare Metals Inc. ('Avalon') góhts'edi tã'a ejôh Canada zhíéh gots'êh eghálaeda ndedhé áíé á agît'e, gots'êh tthe déti kágeneta t'áh tã'a eghálagenda. Dúht'ôh tã'a Thor Lake godhoh tthe déti kágenetah gha edíhtã'éh gots'êh. Thor Lake góhts'edi tã'a ejôh Góhdli Ndéhe gozhíéh Mackenzie Mining District gozhíéh tã'a góæô, gots'éh Sáámba Gólî Kúé gots'êh tak'éh gots'êh kámbaa tsô ts'êh nihts'i gots'ç 100 kilometers á agøt'e.*

### English

#### DEVELOPMENT DESCRIPTION

Avalon proposes to mine, mill, and produce rare earth carbonate and oxides, zirconium, niobium and tantalum oxides from the Nechalacho deposit, located on its Thor Lake Property. The proposed project is referred to as the Thor Lake Project (TLP).

Approximately 12-14 million tonnes of mineral resources will be mined from the Nechalacho deposit over a period of about 20 years of operations. Construction will begin 16-18 months before the start of operations. At the end of mine life, reclamation activities will begin and continue for a period of about three years.

The proposed TLP has two main 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, 85 km east of Hay River, NT on the south shore of Great Slave Lake (Figure 1).

Rare earth elements (REEs) will be mined underground and concentrated at the Nechalacho Mine and Flotation Plant site. The resulting REE concentrates will be barged during the summer months across the east end of Great Slave Lake to the Hydrometallurgical Plant site. Upon arrival, the concentrate will be trucked from the south shore of Great Slave Lake to the Hydrometallurgical Plant site via a short (8 km) haul road. The concentrate will be further processed at the Hydrometallurgical Plant. The resulting final products will be hauled to the Hay River railhead in sealed containers via truck, and direct shipped by the CN railway for further processing in the south.

### Translation

**DÁÓNDÍH EGHÁLAÆEDA GHA**

Nechalacho góhts'edi tã'a Thor Lake godhõh á agøht'e. Ezhi godhõh tthe detí kaondíh kágedhah gots'èh seegehãî t'áh tã'a eghálagenda kéogenñhthi gha: zirconium, niobiom, tantalum. Edi ghálaeda tã'a *Thor Lake Project (TLP)* góhgedi.

Ôki hono xaye ezhi eghálagîndá nidé, ká tthe déti, hono õõ ôki, íle nidé, hono õõ díî *Million Tons* éhsãã ezhi gots'èh kágedhah gha olí aegenidhê. Ezhi tthe déti seegeleh kéogenñhthi godheh tã'a ká hono õõ ets'çtae, íle nidé, hono ôõ ets'çdíî sa t'áh éhsãã ká t'ahsíi adezhõ zhet'áh eghálagenda seenígíla gha olí aegenidhê. Ká ezhi eghálagenda anagît'e gots'èh nidé, tae xaye gots'ç éhsãã ezhi godhõh ndéh seenagogedleh gots'ç ezhi godhõh eghálagenda gha.

Eghálaeda ôki kádeæa t'áh tã'a eghálagenda gha. Áíé tã'a ndéh gozhíéh gogedíge (*Nechalacho Mine* góhts'edi), gots'èh áíé tã'a tu dâh eghálaeda gok'éh daelíh (*Flotation Plant Site* góhts'edi) gots'èh éhsãã eghálagenda gha. Ezhi gots'èh nidé, dáodençhsø gots'èh dúle ezhi tthe seegíla gots'èh nidé, azhíi megháxoedhe tã'a, Tucho óonêh, *East Arm*, godíî *Hydrometallurgical Plant* góæô gots'ç ageleh gha. Ezhi tã'a Xátã'odee gots'èh 85 km, godíî, Tucho mbáh, *Pine Point* góíæá godhõh, *Greenfield Site*, góhts'edi gots'èh éhsãã eghálagenda gha. (*Figure 1*) Umbéh nidé, godíî gots'èh tthe kágele gots'èh elácho t'áh Tucho teh nígíle gha gots'èh nidé, mehchîê t'áh godíî ezhi *Hydrometallurgical Plant Site* góæô gots'ç nígíle gha, gots'èh k'éndaa seegeleh gha. Ezhi gots'èh nidé, satsõõ teneh see nezûû medáedçde mehchîê k'eh zháhthela t'áh Xátã'odee godíî satsõõ tôlu t'áh Mólandéye gots'ç t'ahsíi ats'ehãî gots'ç nígíle gha. Ezhi gots'èh nidé, satsõõ tôlu (*CN Railway*) k'eh nígíle gha gots'èh k'éndah seegeleh gha Mólandéye gots'ç ageleh gha.

### English

#### **Nechalacho Mine and Flotation Plant**

*Mine:* The Nechalacho Deposit will be an underground mine. A decline ramp (15% ramp slope) will be used to access the ore zone located at approximately 200 m depth. Production is planned for 2,000 tpd during the life of the Project. Mining will be carried out with a first pass of primary stopes, followed by pillar extraction after the primary stopes have been filled. Rubber-tired mechanized equipment will be utilized to provide maximum flexibility. Primary crushing will be completed underground and crushed ore and waste rock will be conveyed to the surface.

*Flotation Plant:* The proposed processing facilities will be a Flotation Plant that will use standard grinding, crushing and flotation techniques to produce a high grade concentrate. This concentrate will then be shipped by barge from the mine site across Great Slave Lake to the proposed Hydrometallurgical Plant site for secondary processing.

*Water Supply:* The fresh and process water supply source is Thor Lake.

### Translation

#### **Nechalacho Mine gots'êh Flotation Plant**

Ndéh Zhíéh Gogedíge. Nechalacho Mine tá'a ndéh zhíéh 2,000 meters godígé á agøht'e. 15% grade gohdágóîæá k'çç ezhi tthe egenidhê kágele gha. Ndéh zhíéh 200 meters éhsãã 15% grade nágóîæá k'çç éhsãã ezhi tthe kágele gha. Ká eghálaeda kéonidhe gots'êh nidé, dzêh taût'ee tthe 2,000 tons aedéhkéh éhsãã kázhe gha olí. Gozhíéh gogedíge, *Primary Stopes* gógedi gháádé éhsãã ndéh zhíéh gogedíge kéogeníhthi gha, gots'êh nidé, ká ezhi *Primary Stopes* k'çç ndéh níagenihtá'i gots'êh nidé, *Pillar Extraction* gháádé éhsãã gozhíéh gogedíge gha. Ndéh zhíéh mehchiê nezûû náedah gha mehchiê meké *rubber* t'ah hólí t'áh éhsãã egháalagenda gha. Ndéh ét'ih éhsãã ala tthe tágedetsi gha gots'êh nidé, ndéh dâh gots'ç ageleh gha.

Tu Dâh Eghálaeda Gokéh Daelîh. Tu dâh eghálaeda daelîh gots'êh eghálaeda tá'a dúht'õh dáõndíh eghálaeda gogháádé éhsãã tthe tágedetsi gha. Ezhi gots'êh nidé, k'éndaa seegeleh gha ezhi tthe tágedíitsi elácho t'áh Tucho teh *Hydrometallurgical Plant Site* gots'ç ageleh gha.

Tu. Eghálagenda gha tu gots'êh tu ts'ets'éh tá'a *Thor Lake* gots'êh éhsãã agehæî gha.

English

INSERT FIGURE 1 HERE

Translation

Ejôh éhsãã Figure 1 níts'êchu gha

## English

*Tailings Management Facility:* The Tailings Management Facility (TMF) will be located up slope from the Flotation Plant and northeast of Thor Lake in the local drainage area of Ring and Buck lakes. The tailings will be discharged to a number of locations around the tailings management facility to develop a relatively flat tailings beach and centralized supernatant pond to maximize tailings storage efficiency. Construction of the tailings management facility will occur in two phases over a period of three years. Any water decanted from the TMF will be discharged in compliance with MVLWB Water License and federal MMER discharge criteria.

*Camp:* A 150 person camp to house the employees and staff will be constructed beside the Flotation Plant and close to the airstrip.

*Power Supply:* All site power will be generated by a diesel powered generation facility at the site. The power requirements will range from 7.4 MW to 8.4 MW for the 2,000 tpd operation. Standby diesel generators will be installed as a secondary power source for critical operations and safety components.

*Concentrate Storage and Loading:* Approximately 360 tonnes per day (tpd) of concentrate will be produced from the Flotation Plant. The concentrate will be loaded directly from the Flotation Plant into half-height intermodal containers. Once loaded, the containers will be removed from the Flotation Plant and transported to the seasonal barge loading area either for shipment to the Hydrometallurgical Plant or for winter storage in a designated area to be located near the barging facility.

*Access Road:* The existing 5 km access road from the proposed Nechalacho Mine and Flotation Plant site to the current barge landing site will be upgraded for the safe transport of concentrate and supplies.

*Airstrip:* The current 300 metre airstrip is located northwest of the proposed Flotation Plant and west of Thor Lake. The airstrip will be upgraded and extended 700 m to a total length of approximately 1,000 m. The upgraded airstrip will accommodate Dash 8 and Buffalo aircraft and facilitate the safe transport of employees and supplies.

*Fuel Storage:* Diesel fuel will be transported from the south side of Great Slave Lake to the barge dock at the Nechalacho Mine and Flotation Plant site. Upon arrival, fuel will be offloaded to an upland receiving fuel storage facility to be located adjacent to the dock at Great Slave Lake. It will then be transferred by tanker truck to the main storage facility to be located west of the Flotation Plant near the diesel power plant.

*Dock Facility:* A seasonal floating dock consisting of a single shallow draft barge connected to shore for the open water period and an adjacent yard will be used for concentrate storage and shipment to the Hydrometallurgical Plant site. It will also be used to receive and handle the annual resupply of major Mine consumables including fuel.

## Translation

Eghálaæeda Ts'êh T'ahsí Meæets'enidhêle Nahâats'edehtâ'é  
Gok'éh. T'ahsí meæets'enidhêle nahâats'edehtâ'é gok'éh tâ'a

godee, *Thor, Ring, gots'êh Buck Lake* godhôn éhsãã góæô gha, gots'êh tae xaye got'áh éhsãã gogehtsi anagît'e gha olí. Nezûû nahâagedehtâ'é gots'ç tâ'a godîî nahâagodedehtâ'é godhôn sâanéht'éa det'aze níagehtâ'é gha. Dehcho K'çç Ndéh Gots'êh Tu Ehxoedih Eghálaæeda (MVLWB), gots'êh Sáamba Nálée gots'êhk'eh MMER, dáóndíh ndéh gots'êh tu k'eh t'ahsíi dzõôt'e nahâats'edehtâ'é gha góæô gedi gháádé zôh éhsãã eghálagenda gha gedi.

Godîî Dene Eghálaæídéh Nádéh Gha. Flotation Plant gots'êh godîî elá k'et'ah nanedéh gok'éh gots'çxôh éhsãã dúle dene áíé latth'ono õõ sûláé hono nádéh gogehtsi gha.

Ek'ak'õõ Etâeh. Tâeh t'áh éhsãã ek'ak'õõ etâeh gehtsi gha. Áíé dzêh eghálaæeda taøt'ee tthe 2,000 tons seets'ehæî gha áíé dzêh taøt'ee ek'ak'õõ etâeh 7.4 Megawatts gots'êh 8.4 Megawatts éhsãã egenidhê gha olí. Satsãã met'áh ek'ak'õõ etâeh ts'ehtsi dzáandeh goch'ã shu áíé dúle xidih mendah ts'êchu ts'êh gehæô gha.

Godîî Ndéh Zhíéh Gots'êh Tthe Káts'edah Dhela Gha. Dzêh taût'ee, tthe ká tae latth'ono õõ ets'çtae hono tons aedéhké éhsãã Flotation Plant seegehæî gots'êh t'ahsñé k'éndaa seegeleh gots'ç ageleh gots'ç nígehtâ'é gha. Ezhi gots'êh nidé, sats'õõ teneh nezûû medáedçde t'áh godîî dúle tu t'áh t'ahsñç ats'eleh gots'ç ageleh gha, íle nidé, xaye gogha Flotation Plant thetâ'i gha ezhi gots'ç ageleh gha.

Eghálaæeda Gots'ç Ek'élu Niæá. Hotié t'áh t'ahsíi ek'élu k'çç ats'ehæî gha dúh t'õh ek'élu 5 km aendeh, *Nechalacho Mine, Flotation Plant Site*, gots'êh godîî elá tûgothê gots'ç ek'élu zhániaá seezháts'eleh gha.

Elá K'et'ah Nanedéh Gok'éh. Dúh t'õh elak'et'ah nanedéh gok'eh tâ'a 300 meters aendeh zôh á ôt'e gots'êh *Flotation Plant Site, gots'êh Thor Lake* gots'çxôh a theæô. Ezhi seenats'eleh gha gots'êh áíé limil aendeh gots'ç óné ats'eleh gha. Kats'ñlá gots'êh nidé, elák'et'ah, *Dash 8* gots'êh *Buffalo Airways* goæelák'et'ah dúle nanedéh gha olí.

Tâeh K'éxodíh Gok'éh. Elácho t'áh éhsãã Tucho teh *Nechalacho Mine*, gots'êh *Flotation Plant Site* gots'ç tâeh níazheh gha, gots'êh nidé, tambáh gots'çxôh satsötenehcho zhiáts'ehtá'é gha. Ezhi gots'êh nidé, mehchiçcho t'áh *Flotation Plant Site* gots'çxôh godíî ek'ak'õõ etsi góæô gots'ç níats'eleh gha.

Elá Níagohthe Gok'éh. Umbéh tu t'áh *Hydrometallurgical Mine* gots'ç t'ahsíi ats'eh'î gots'ç t'ahsíi ts'ehãa gogãh éhsãã tambáh elá tógohthe gok'éh góæô gha. Ezhi gots'êh shu éhsãã áíé xaye taût'ee dúle t'ahsíi met'áh eghálaæeda, met'áh ts'enda, gots'êh tâeh níazheh gha olí.

## English

### **Hydrometallurgical Plant**

*Hydrometallurgical Plant:* The proposed Hydrometallurgical Plant will further process the REE concentrates from the Nechalacho Mine and Flotation Plant. The process will include acid baking, water washing, filtration, solvent extraction, and product drying facilities to produce direct ship products. The main waste from this process will be an inert gypsum tailings which will be sent to the Hydrometallurgical Tailings Facility for permanent storage.

*Water Supply:* Process water will be obtained from an existing nearby open pit lake and treated as necessary for use.

*Hydrometallurgical Tailings Facility:* The proposed Hydrometallurgical Tailings Facility (HTF) will be located inside an historic open pit (L-37 pit) located south-southwest of the Hydrometallurgical Plant location, near the former historic town site of Pine Point. Excess supernatant water from the HTF will be pumped to another historic open pit (N-42 pit), located to the southwest, for infiltration into the Presqu'ile aquifer. Any water decanted from the HTF will be discharged in compliance with MVLWB Water License discharge criteria.

*Concentrate Storage and Loading:* Upon arrival at the Hydrometallurgical Plant, the concentrate storage containers will be unloaded from the trucks and placed into a secure storage area. As required, the containers will be moved into a heated thaw shed. Once in the thaw shed, the concentrate will be removed from the containers. The containers will be cleaned prior to shipment back to the Nechalacho Mine.

*Power Supply:* Average power consumption for the Hydrometallurgical Plant during start-up and steady state operations is expected to be between 3.5 to 4.0 MW. This power will be provided through the existing Northwest Territories Power Corporation (NTPC) power grid and substation located near the site. Secondary and backup supply of power will be provided by diesel powered generating units on-site.

*Limestone Storage:* The limestone used to neutralize the Hydrometallurgical Plant's waste stream before discharge to the tailings management facility will be obtained from local supply sources and

stockpiled in a designated area next to the Hydrometallurgical Plant. Because the limestone is a neutralizing product, no special stockpile considerations will be necessary.

*Haul Road:* An existing access road will be upgraded to transport the concentrate offloaded from barges on the south shore of Great Slave Lake to the Hydrometallurgical Plant. The haul road will be approximately 8.6 km long.

*Dock Facility:* A seasonal floating dock consisting of two barges connected together to create a temporary floating dock and a marshalling yard will be installed on the south shore of Great Slave Lake. The seasonal dock facility will permit the berthing and offloading of Thor Lake REE concentrates onto flatbed trucks for transportation to the Hydrometallurgical Plant. This facility will also be used for the annual shipment of major mining consumables, including fuel, to the Nechalacho Mine site.

*Product Transportation to Railhead:* The Hydrometallurgical Plant will produce about 418 tpd of moist concentrate and light rare earth products. The moist acid-baked residue makes up 330 tpd while the moist light rare earth filter cake is 88 tpd. Both concentrate and light rare earth products will be dried during filtration to minimize moisture content and prepare the products for shipment to Avalon's separation plant. The final products will be shipped by truck in sealed intermodal containers using Highway 5 from the Hydrometallurgical Plant to the Hay River railhead. The final products will be direct-shipped by train for further downstream separation.

## Translation

### **Hydrometallurgical Plant**

*Hydrometallurgical Plant.* Nechalacho Mine gots'êh *Flotation Plant Site* gots'êh tthe k'ála see nezûû seedlále tâ'a *Hydrometallurgical Plant site* gots'êh éhsãã nats'eníhthih, tu t'áh mek'eaætsih, deg hats'edehtâ'é, gots'êh ts'ehgô t'áh k'éndaa seets'eleh gha. Ezhi gots'êh nidé, azhíi kí meæts'enidhêle tâ'a ããh mek'éxodíh gha T'ahsíi Meæts'enidhêle Nahâats'edehtâ'é gots'ç ats'eleh gha.

Tu. Tu meæts'enidhêle tâ'a dúh t'õh tu gha ndéh zhíéhgodígé gots'êh á káts'ezene gots'êh dúle ts'ets'éh gha seets'ehæî gha.

|                           |                           |              |                   |                           |
|---------------------------|---------------------------|--------------|-------------------|---------------------------|
| <u>Hydrometallurgical</u> | <u>Mine</u>               | <u>Gogha</u> | <u>T'ahsíi</u>    | <u>Meæts'enidhêle</u>     |
| <u>Nahâats'edehtâ'é</u>   | <u>Gok'éh.</u>            | Godîî        | <i>Pine Point</i> | góîæá gots'çxôh           |
| <i>Gozhíéhgodígécho</i>   | <i>(Borrow</i>            | <i>Pit</i>   | <i>L-37)</i>      | gots'çxôh éhsãã           |
| <u>Hydrometallurgical</u> | <u>Mine</u>               | <u>Gogha</u> | <u>T'ahsíi</u>    | <u>Meæts'enidhêle</u>     |
| <u>Nahâats'edehtâ'é</u>   | <u>góæô</u>               | gha.         | Ezhi gots'êh      | k'éndaa tu ch'ilé tâ'a    |
| <i>nezûû</i>              | <i>deg hats'edehtâ'é</i>  | gha          | gots'êh           | nidé, ezhi shu nodêê ndéh |
| gots'ç                    | <i>nahâônats'edehtâ'í</i> | gots'ç       | zhundíh           | Ndéh Zhñçhgodígé          |
| <i>(Borrow</i>            | <i>Pit</i>                | <i>N-42)</i> | zhíéh             | éhsãã ts'ehtâ'í gha.      |



Hydrometallurgical Mine Gogha T'ahsíi Meæets'enidhêle Nahâats'edehtâ'é Gok'éh gots'êh ndéh gots'ç tu nahâats'edehtâ'é tâ'a Dehcho K'çç Ndéh Gots'êh Tu Exoedih T'áh Eghálaeda gots'êh Tu Gha Edehtâ'éh Gháádé zôh éhsãã ats'et'î gha.

T'ahsíi Meæets'enidhêle T'ahsñç Ats'eleh Gots'ç Mek'éxodíh Gok'éh. T'ahsíi meæets'enidhêle *Hydrometallurgical Plant* nízhe gots'êh godîî nezûû mexoedih níts'îdhah gha. Ezhi gots'êh nidé, godîî ts'eníhthih gots'êh nats'ehxî gogha níts'îdhah gha, gots'êh nidé, azhíi teneh t'áh ezhi nízha zhíéh gots'êh káts'ehtâ'í gha. Ezhi gots'êh nidé, see nezûû ezhi teneh k'eaæegehtsi gogháádé *Nechalacho Mine* gots'ç anats'eleh gha.

Ek'ak'õõ Etâeh. Ala eghálaeda kéonídhi gots'êh ezhi tâ'âh tâ'a 3.5 gots'êh 4.0 MegaWatts gots'ç éhsãã t'áh ats'et'î gha olí. Ezhi tâ'a Northwest Power Corporation (NCPC) gots'êh éhsãã ats'eh'î gha, gots'êh godôô ezhi eghálaenda nidé, gok'ak'õõ etâeh etsi gha satsõõ thíâô t'áh éhsãã ahthít'î gha.

Limestone K'éxodíh Gok'éh. Limestone t'áh éhsãã tu ch'ilé Hydrometallurgical Plant gots'êh T'ahsíi Meæets'enidhêle Nahâôts'edehtâ'é gots'ç tu nahâats'edehtâ'é seets'ehæî gha. Ezhi tâ'a ekúhdêê gots'êh zhúkøç gots'êh éhsãã náts'ehndíh gha. Limestone tâ'a kí t'ahsíi móoneji ôt'ele, t'áh kí kõtâ'íé mexoets'íhndih t'áh mek'éts'endíh gha góæô íle.

Ek'élu Mek'çç T'ahsíi K'ezheh. Dúh Tucho ts'ç ek'élu zhániaá seethidleh t'áh éhsãã Tucho k'çç gots'êh t'ahsíi nahxets'ç níazheh, *Hydrometallurgical Plant* gots'ç níathíddheh gha. Ezhi ek'élu tâ'a 8.6 Kilometers aendeh á ôt'e.

Elá Tôgothe Gok'éh. Umbéh taût'ee éhsãã godîî eghálaæída gotthée, Tucho mbah t'ahsíi k'éhodíh gok'éh gots'êh elá tôgothe gok'éh daelíh nahthítsi gha. Ezhi gots'ç éhsãã umbéh taût'ee Thor Lake gots'êh ndéh zhíéh gots'êh tthe káthíle Tucho teh gots'êh níathíle gha, gots'êh nidé, mehchiê necha t'áh *Hydrometallurgical Plant* gots'ç níathíle gha. Ezhi gots'êh shu éhsãã dúle áíé xaye taût'ee ndéh zhíéh gots'êh tthe káthíddhah gots'êh tâeh *Nechalacho Mine* gots'ç ahthíæî gha.

Satsõõ Tôlu Gots'ç Tthe Ats'ehæi. Dzêh taût'ee éhsãã Hydrometallurgical Plant gots'êh ndêh zhíéh gots'ê tthe káts'eleh dîi latth'ono õõ hono õõ ets'çdîi *tons* ats'ehæi gha olí. Tae latth'ono õõ tae hono *tons* tâ'a nahthehtse éhsãã ot'e gha gots'êh ets'çdîi õõ ets'çdîi tâ'a thegô éhtsãã ôt'e gha. Ezhi gots'êh nidé, ahâah k'endaa ts'ehgô gogháádé *Avalon Separation Plant* gots'ç ats'eleh gha. Ezhi gots'êh nidé, satsõõ teneh nezûû medáedçde mehchiê k'eh zháhthela t'áh *Hydrometallurgical Plant* gots'êh Xatâ'odee godîi satsõõ tôlu t'áh t'ahsûi t'ahsñç ats'ehæi gots'ç ats'eleh gha. Ezhi gots'êh nidé, satsõõ tôlu t'áh see nodee seets'eleh gha zhundaa ats'eleh gha.

## English

### **Human Resources**

*Nechalacho Mine and Flotation Plant:* The Nechalacho Mine and Flotation Plant site is planned to operate 365 days per year with a 24 h/day, 7 day/week schedule (24/7). The employment schedule will be based on fly-in/fly-out transportation, onsite camp facilities and a one week in/one week out rotation.

During construction of the Nechalacho Mine and Flotation Plant about 80 personnel will be needed at the site at any given time. These numbers include employment generated through the third-party business contract opportunities needed to service the Project. During the operations phase, about 216 full-time employees will be needed. At the end of mine life, about 20 positions will be retained for reclamation of the Nechalacho Mine and Flotation Plant site.

*Hydrometallurgical Plant:* The Hydrometallurgical Plant site is planned to operate 351 days per year with a 24/7 schedule. The Plant will shut down for maintenance 14 days every year during the summer. All employees with the exception of staff and contract maintenance will take vacation during the annual shutdown. Avalon will provide employees bus transportation from Hay River and Fort Resolution to the Hydrometallurgical Plant site.

During construction of the Hydrometallurgical Plant about 87 personnel will be needed at the site at any given time. These numbers also include employment generated through the third-party business contract opportunities needed to service the Project. During the operations phase, about 69 full-time employees will be needed. Approximately ten positions will be retained for reclamation of the Hydrometallurgical Plant site following completion of all operations.

## Tanslation

### **Dáóndíh Eghálaæeda Gha**

*Nechalacho Mine gots'êh Flotation Plant Site* tâ'a ahâah, xaye gháádé dzêh t'aût'ee, dzene gháádé éhsãã eghálaæeda gha gots'êh dene ezhi eghálaæídéh tâ'a áíé edáídzçç taût'ee éhsãã eâendah gedêh gha.

*Nechalacho Mine gots'êh Flotation Plant Site gots'ehtsi ekúh tã'a dene gogha eghálaæídêh gots'êh dene edegha eghálagenda goníáædçtã'êh ets'çdîî hono gotah éhsãã ezhi eghálaæídêh gha olí. Ká tthe ghálaeda kéonídhe gots'êh nidé, ká dene ôki latth'ono ôô hono ôô ets'çtae éhsãã ets'enidhê gha olí. Ká ezhi godhôn eghálaeda anahøt'e gots'êh nidé, ezhi godhôn seenagots'edleh gha dene ôki hono zôh éhsãã ets'enidhê gha olí.*

*Hydrometallurgical Plant.* *Hydrometallurgical Plant Site ká eghálaæeda kéonídhe gots'êh nidé, áíé xaye taût'ee dzene gháádé tae latth'ono õõ súláe hono õõ áíé dzêê éhsãã eghálaeda gha, gots'êh áíé xaye taût'ee ôki edáedzêê gots'ç éhsãã satsõõ adezhôô seenats'eãñh gha gódoêgedechu gha. Ekúh éhsãã dene gogha eghálaæídêh k'éogedáæa goghøt'áh gha kó dene amíi kaogedhe gots'êh dene edegha eghálagenda goníáædçtã'êh zôh éhsãã ezhi eghálaedêh gha. Avalon éhsãã Xátã'odee gots'êh Deneni Køç gots'êh dene *Hydrometallurgical Plant* eghálaæídêh bus t'áh áatagodedheh gha.*

*Hydrometallurgical Plant\_\_gots'ehtsi ekúh tã'a dene gogha eghálaæídêh gots'êh dene edegha eghálagenda goníáædçtã'êh ets'çdîî hono õõ áãhdîî éhsãã ets'enidhê gha olí, gots'êh ká tthe seets'ehæî kéogeníhthe nidé, dene ets'çtae õõ áíúlí éhsãã ezhi gogha egenidhê gha olí. Ká adezhô t'áh ezhi eghálaeda anaxøt'e gots'êh nidé, ndêh seenagots'eleh gogha dene hono zôh éhsãã egenidhê gha olí.*

### **English**

#### **COMMUNITY ENGAGEMENT**

Avalon supports and practices the core business value that effective and meaningful communication is very important for the development of sound corporate and community relationships.

The Thor Lake Property is situated in the Akaitcho Territory and is subject to a comprehensive land claim negotiation between the Akaitcho Dene First Nations and Canada's federal government. An interim measures agreement is currently in place and includes a land withdrawal that was implemented in 2007. The land withdrawal precludes new mineral title from being granted by the Crown in the Akaitcho Territory for a period of up to five years while a land-use planning process is completed. The rights of existing mineral rights holders in this area are unaffected.

Starting in 2005, and continuing throughout the baseline data collection period to present, Avalon has made continuous efforts to keep the affected Dene and Metis informed of all aspects of the

Project. Avalon's efforts have been communicated through telephone conversations, emails, presentations, site visits, personal visits and meetings. To date, all issues have been dealt with in an open, honest, transparent and mutually agreeable manner. Avalon has also initiated meetings and correspondence with the Department of Indian and Northern Affairs (INAC) and the Mackenzie Valley Land and Water Board (MVLWB) during this period. Collectively, these activities have provided the Company the opportunity to share information, coordinate activities and develop relationships in the proposed TLP area. Engagement activities with all affected stakeholders are planned to continue throughout the permitting process and the Project's life.

### Translation

#### **DÁÓNDÍH KŌTAH GOXÉH EGHÁLATS'ENDA GHA**

Avalon tá'a godîî eghálagenda godhôn kəç kázháodénílá goxéh ehtth'i gogendeh gots'êh nezûû goxéh eghálagenda tá'a see kətà'íé gogha met'áodéæá.

Thor Lake godhôn eghálagenda tá'a dúh t'õh Akaitcho Territory á agøht'e gots'êh Akaitcho Dene First Nation k'ála Sáámba Nálée goxéh k'edaogedæah t'áh ezhi gots'ç k'aogedhe gots'ç eghálagenda ká kegogedîhshô. Avalon tá'a dúh t'õh, 2007, Akaitcho Dene First Nation gots'êh Sáámba Nálée, ndéh ndaa dáegénihgé gots'êh ndéh ndaa nodêê eáexéh k'edaogedæah lööts'ç megha eáexéh seegogñlá gots'ç t'ahsíi megháádé agot'î gha gehtsi gháádé tá'a ezhi godhôn eghálagenda. Ndéh sùláé xaye gots'ç medáedçge tá'a dáóndíh dúle ezhi ndéh t'áh agot'î gha edehtá'éh ndedhé hólí gots'ç tá'a dúyé met'áh agot'î gha, kó, dene amíi ezhi ndéh gha seegots'eleh godheh ezhi ndéh t'áh aget'î gha edehtá'éh gots'êh tá'a kí ech'aodéndíh gha íle.

2005, áaa Avalon ezhi godhôn eghálagenda kéogeníhthe gots'êh dúh gots'ç, sáodéhthale taût'ee, telephone, emails, goxéh názháegehti, godîî eghálagenda níagogeleh, gots'êh gokəç góts'ogogehthe, t'áh Dene gots'êh Megháédék'òh amíi goch'aodéndíh ezhi godhôn dáget'î gots'ç kagedi. Dúh gots'ç tá'a ká t'ahsíi adezhô meghòets'enedíh nezûû gots'êh ehtth'i t'áh eáexéh gots'endeh t'áh megha seezhágot's'ñlá. Sáámba Nálée gogha Dene Ts'êhk'eh Eghálaæeda gots'êh Dehcho K'çç Ndéh Gots'êh Tu Exoedih T'áh Eghálaæeda shu goxéh gogendeh t'áh shu ezhi godhôn eghálagenda gha shu seezháogeleh gots'ç eghálagenda. Edi t'ahsíi adezhô k'eh eghálagenda gogháádé tá'a ká t'ahsíi áô t'áh ezhi godhôn eghálagenda gha edegha dúh ts'ç seegogñlá, gots'êh ká ezhi godhôn eghálagenda anagít'e gots'ç éhsãã kaondíh eghálagenda gha.

## English

### ENVIRONMENTAL SETTING

As indicated, the TLP will have two main site components, with site-specific environmental conditions. The sites include the Nechalacho Mine and Flotation Plant site located at the Thor Lake Property, about 5 km north of the Hearne Channel of Great Slave Lake, and the Hydrometallurgical Plant site, located at the existing brownfields site of the former Pine Point Mine on the south shore of Great Slave Lake.

*Nechalacho Mine and Flotation Plant Area:* The Nechalacho Mine and Flotation Plant site area is located in the Great Slave Upland High Boreal (HB) Ecoregion, which is a subdivision of the larger Taiga Shield HB Ecoregion). The land is dominated by low topography and fractured bedrock plains. Black spruce, jack pine, paper birch, and trembling aspen form discontinuous forested patches that are mixed in with exposed rock. Wetlands and peat plateaus commonly form around the margins of shallow lakes, as well as in wetter depressions and lowlands.

The Thor Lake watershed covers an area of 2,100 ha. The Ring Group (Ring, Buck, Drizzle, and Murky Lakes) constitutes 800 ha or 38% of that watershed, and about 19% of the annual Thor Lake discharge (1.8 million m<sup>3</sup>/yr).

In general, waters in the proposed Nechalacho Mine and Flotation Plant site area have high alkalinity, hardness, and calcium. The lakes in the area tend to be relatively clear with low suspended sediment levels, and low nutrient and metals concentrations.

Nineteen lakes within the Thor Lake watershed area have been sampled for fish. Nine of the sampled lakes were found to have no fish: Buck, Cressy, Megan, North Tardiff, Ring, South Tardiff, Drizzle, Ball, and Thorn. All of these are shallow lakes, with four having maximum depths of two metres or less.

The preliminary Mine plan includes the deposition of Mine tailings in the area presently occupied by Ring, Ball, and Buck lakes, and the release of decant water into Drizzle Lake, which in turn drains into Murky Lake and then Thor Lake. No fish were captured in Ring, Ball, Buck, or Drizzle lakes, and only one northern pike was captured in Murky Lake. These four lakes, which make up the Ring Lake group, are all very shallow (<2.5 m), and are likely to either freeze completely in winter or have free water that becomes anoxic after freeze-up.

Thor Lake, and to some extent Long Lake (due to its connection to Thor Lake) are the main fish habitats in the Nechalacho Mine and Flotation Plant site area. Both lakes support healthy populations of lake whitefish, lake cisco, and northern pike. These lakes can also be considered to be a closed system for fish because immigration is excluded by a natural waterfall at the outlet of Thor Lake and because there are no lakes upstream that provide suitable habitats. As such, the fish populations in these lakes are self-sustaining.

As noted, the proposed Nechalacho Mine and Flotation Plant site area lies within the boreal forest of the Taiga Shield Ecoregion. However, both boreal and tundra animals frequent the area. Approximately 26 species of mammals may frequent this region. Tundra species, such as barren-ground caribou are typically found within this Ecoregion during the winter months only, spending the summers on the tundra. Other species, such as moose, gray wolf, grizzly bear, and wolverine

are residents of both tundra and boreal forest, and frequent the transitional Ecoregion to the north throughout the year. Boreal species such as mink and beaver are reaching their northern limit at this latitude and are seldom found beyond the treeline.

The Taiga Shield Ecoregion is also home to about 150 species of birds, the majority of which are seasonal migrants. However, considerably fewer species are expected to occur in the area of the proposed Nechalacho Mine and Flotation Plant. The lakes and wetlands of the area provide habitat for a wide variety of waterbirds and shorebirds. A number of birds of prey, or raptors, use this region, either as residents or migrants.

*Hydrometallurgical Plant Area:* As previously noted, the Hydrometallurgical Plant site will be located in an existing brownfields area of the former Pine Point Mine site, which remains a relatively degraded and barren area from an environmental perspective. Nevertheless, the Plant site is located within the Great Slave Lowlands Mid-Boreal Ecoregion of the Taiga Plains Ecozone. The area is characterized by short, cool summers and long, cold winters.

Nearly level lacustrine and alluvial deposits with a mosaic of sedge wetlands and grass meadows, diverse forests and wetlands typify the Slave Lowland MB Ecoregion. The vegetation of this Ecoregion is characterized by medium to tall, closed stands of jack pine and trembling aspen. White spruce and black spruce dominate later successional stands. Poorly drained fens and bogs in this region are covered with low, open stands of larch, black spruce and various shrubs.

There are no streams or significant natural water bodies and thus no fisheries values or habitats in the Hydrometallurgical Plant site area. Great Slave Lake, the second largest lake in the Northwest Territories, will be used for the barging component of the TLP. The lake supports at least 27 species of fish including lake trout, lake whitefish, inconnu, pike, walleye and burbot, which are highly valued by the communities in the region.

Moose, woodland caribou and occasionally wood bison are the main ungulates found in the area of interest, although none are considered common. The bird life present is typical of the boreal forest, and the south shore of Great Slave Lake is considered to be an important concentration site for many bird species during their annual migrations.

### Translation

#### **GODÎÎ EGHÁLAEDA**

**Thor Lake Project (TLP) tá'a eghálaeda gok'éh ôki gots'éh éhsãã eghálagenda gha gots'éh ndéh tsñgodhi goch'ã t'ahsîi ndaa kõtá'íé met'áodéãã gháádé aget'î nidé zôh éhsãã dúle ezhi eghálagenda gha. Ezhi eghálaeda ôki tá'a Nechalacho Mine gots'éh Flotation Plant Site á agît'e, gots'éh Tucho ts'éh 5 kilometers, Hearne Channel k'eh á zhágóla. Hydrometallurgical Plant tá'a Tucho mbáh godîî Pine Point góîãã gots'çxôh Brownfields Site góhts'edi îîlé á góãô.**

**Nechalacho Mine gots'éh Flotation Plant godhôh: Nechalacho Mine gots'éh Flotation Plant tá'a Tucho dhôh Great Slave Upland High**

*Boreal Ecoregion (HB)* góhts'edi gozhíéh á zhágóla. *Great Slave Upland Boreal Ecoregion* tá'a *Taiga Shield HB Ecoregion* zhiéh á góæô. Ezhi ndéh tá'a kí dzendále á agøht'e, gots'êh mek'eh shu tthe âô gøli. Mek'eh shu *Tsu Denítæ*, *Ndudhe*, *K'i*, gots'e *Trembling Aspen* zhágøli. Mek'eh shu ndéh nagóhtse gots'êh ndéh daeleh âô shu zhágøli. Godîi mie godñhjîle gombáh tá'a ndéh ndadhehtsi gots'êh niemba zhágøli.

*Thor Lake* godhøh tu zhágøli tá'a ká 2,100 ha agodacho gotah á agøht'e. Ezhi godhøh mie díi (*Ring, Buck, Drizzle*, gots'êh *Murky Lakes*) godhøh tá'a káa 800 has agodacho á agøht'e gots'êh, gots'êh tu ká 38% anéht'ée sóondi *Thor Lake* tah nitá'i, *Thor Lake* gots'êh tu kádelîh nidé, ezhi mie díi gots'êh ká tu 19% anéht'ée sóondi tá'a metah ôt'e. (Adezhø t'áh áíé xaye gogha ká tu 1.8 Million Cubic Meters gotah á ezhi gots'êh kádelîh).

*Nechalacho Mine* gots'êh *Flotation Plant Site* godhøh tu tá'a delô á azhøt'e gots'êh alkali gots'êh calcium shu âô metah. Ezhi godhøh mie shu kí tu tá'áh zøh godlih á tu tah gohdléh, gots'êh kí t'ahsíi tu tah nádéh gogha t'ahsíi zhoshégetí gha âô gølile gots'êh kí tu tah satsøø âô shu gølile.

*Thor Lake* Godhøh mie hono øø áíúli tá'a káa mezhíéh áue k'eats'enéhta. Mie áíúli zhiéh tá'a áue edi kaondih tá'a zhágøli: *Buck, Cressy, Megan, North Tardiff, Ring, South Tardiff, Drizzle, Ball*, gots'êh *Thorn*. Ezhi mie tá'a adezhø, kí godñhjîle á azhøt'e. Díi zøh tá'a káa ets'çtae goké gotah gots'ç aodéjhíh. *Ring, Ball, Buck*, gots'êh *Dzizzle Lakes* gozhíéh tá'a kí áue éts'aadele. *Murky Lake* zhiéh tá'a kí údaa zøh éts'aade. Edi mie díi tá'a kí ets'çtae goké gots'ç kó aodéjhíle t'áh xaye nidé, see tu tá'áh gots'ç éhsää tu etê sóondi.

*Nechalacho Mine* gots'êh *Flotation Plant Site* godhøh mie tá'a *Thor Lake* gots'êh *Long Lake* godlih zøh éhsää gozhíéh áue zhágøli. Ezhi mie øki tá'a káa *Lúa, Údaa*, gots'êh *Cisco* âô godlih gozhíéh zhágøli. Ezhi mie øki godee tá'a kí mie dúle mezhíéh áue gondih zhágølile gots'êh gotthée tá'a náilî nechá godlih gøli t'áh kí ezhi zøh éhsää lue zhágøli. Ezhi t'áh tá'a, kí ezhi áue nádéh ts'îhæøø áue óné at'î.

Nechalacho Mine gots'êh Flotation Plant Site tâ'a Taiga Shield Ecoregion zhíéh dechítah á zhágóla kó, dechítah gotich'ahndi gots'êh dechî húle ndéhe gots'êh tich'ahndi shu ezhi nâzhádéh. Adezhô t'áh káa tich'ahndi ôki hono õõ ets'çtae gotah á ezhi godhôn nádéh. Nódi tâ'a xaye zôh á ezhi godhôn azhát'î. Umbéh nidé, dechî húle ndéhe á azháget'î. Golô, dígah dímbéze, nógha, gots'êh sahcho tâ'a dúle dechítah íle nidé, dechî húle ndéhe nâzhádéh á azhôt'e, gots'êh ááli ezhi godhôn goghâets'enda.

Ezhi godhôn shu umbéh nidé, ká dúle det'ô áié latth'ono õõ súlâe hono kádeæa egots'íhæáh. Gáhjene adezhô tâ'a kí umbéh zôh ezhi níádéh á azhôt'e. Kagondíh kó, Nechalacho Mine gots'êh Flotation Plant godhôn tâ'a kí det'ô áô azhát'île. Ezhi godhôn shu godîi ndéh nathehtse zhágølí tâ'a det'ô túé gots'êh tambáh nádéh gogha gonezû t'áh det'ô kaondíh shu ká ááli goghâets'enda. Det'ô ndah xaye gháádé ezhi nádéh gots'êh umbéh zôh ezhi níádéh shu dúle ghâets'enda.

Hydrometallurgical Plant Godhôn. Hydrometallurgical Plant tâ'a gôdíi Pine Point góíæá îilé gots'çxôh, godîi Brownfields góhts'edi gots'çhxôh á agøht'e. Ezhi godhôn tâ'a kí t'ahsíi zhánízheh gha gots'êh t'ahsíi nádéh gha gonezûle á agøht'e. Kagondíh kó, Taiga Plains Ecozone zhíéh Great Slave Lowlands Mid-boreal Ecoregion zhíéh tâ'a góæô. Ezhi godhôn umbéh agodak'áze gots'êh gók'á, gots'êh xaye tâ'a godîindé gots'êh góhdli.

Ezhi godhôn shu dúle ndéh nahthehtse, tâ'o, gots'êh dechî nádéhzha egots'íhæáh. Ezhi godhôn shu dúle Ndudhe gots'êh Trembling Aspen, ká zhánechá godlíh egots'íhæáh. Ts'u Dek'ale gots'êh Denítâeh shu dúle ezhi egots'ñhæáh. Godîi nagóhtse godlíh shu dúle larch, ts'u denítâe gots'êh gõã gúlíi kâzhádeæa egots'íhæáh.

Ezhi godhôn shu kí deh zhánílíle gots'êh kí mie nezû zhágølíle t'áh kí ezhi godhôn áue ats'ehæi gha gonezû íle. Tucho k'çç éhsãã ndéh zhíéh gots'êh tthe kats'edhah, godîi seets'ehæi gots'ç ats'ehæi gha. Tucho zhíéh tâ'a ká áue ôki hono õõ áãhdîi kádeæá á zhágølí. Ezhi ndah tâ'a áue kaondíh á azhôt'e: sambaa, áua, síhro, údaa, walleye, gots'êh burbot á azhôt'e. Tucho mbáh køç kâzhádénílá áô tâ'a ká kõtá'íé t'áh áue kaúlí got'áogedehthi.

Golô, nódi, gots'êh ôhk'ée dechítah goæejie tâ'a ôhk'ée ezhi godhôn ghâets'enda, kó, kí ááli íle. Detô ezhi nâzhádéh tâ'a ká ááli



dechîndéh gozhíéh gogháets'enda á azhõt'e, gots'êh Tucho Godhôn tâ'a det'ô nadedéh âô gogha kõtâ'íé met'áodéää á ôt'e.

### English

#### IMPACTS ON VALUED COMPONENTS

##### Environmental Effects

The main components of the TLP are expected to have some effects on the local receiving environment. The major potential environmental effects pathways include air, water and terrestrial resources. Tables 1 and 2 summarize the main project components and Valued Ecosystem Components (VECs) that may be impacted by the development of the TLP.

### Translation

Dáóndíh Ndéh Goch'aodéndíh

Thor Lake godhôn eghálaeda ts'îhæõõ tâ'a káa ezhi godhôn ndéh gots'êh tu goch'aodéndíh gha olí. Ndéh, tu, gots'êh zhat'ah tâ'a ká goch'aodéndíh gha olí. Edi megháets'enda (Table 1 gots'êh Table 2) gogháádé tâ'a dúle azhíi goch'aodéndíh gha olí keots'edîhshô:

**TABLE 1: THOR LAKE PROJECT: NECHALACHO MINE & FLOTATION PLANT SITE ENVIRONMENTAL ISSUE MATRIX**

Table 1: Thor Lake Godhoh Eghalaeda: Nechalacho Mine gots'eh Flotation

Plant Site godhoh daondih ndeh goch'aodendih gha oli.

| Project Component<br>Daondih Eghalaeda  | Air Quality<br>Zhat'ah | Water Quality<br>Tu | Fish<br>Aue | Wildlife<br>Tich'ahndi | Vegetation<br>T'ahsii Zhanizheh |
|---|------------------------|---------------------|-------------|------------------------|---------------------------------|
| Site Preparation and Construction<br>Eghalaeda Gok'eh Gots'ehtsi              | ✓                      | ✓                   | ✓           | ✓                      | ✓                               |
| Underground Mining<br>Ndeh Zhiéh Eghalaeda                                    | ✓                      | ✓                   |             |                        |                                 |
| Mine Rock Storage<br>Tthe Tsñndhe K'ehodih Gok'eh                             |                        | ✓                   | ✓           | ✓                      | ✓                               |
| Acid Rock Drainage (ARD) if present<br>Tthe Tsíidhe Godíi Gots'eh<br>Kádehâih |                        | ✓                   | ✓           |                        |                                 |
| Thor Lake Flotation Plant<br>Thor Lake Flotation Plant                        | ✓                      | ✓                   | ✓           | ✓                      | ✓                               |
| Power Generation<br>Ek'ak'ôô Etâeh Etsi Gok'eh                                | ✓                      |                     |             | ✓                      | ✓                               |
| Sewage<br>Tu Ch'ilé Nahâagodeta'é   |                        | ✓                   | ✓           |                        |                                 |
| Tailngs Containment<br>Tthe Dúyé Met'áh Agot'î<br>K'ehodih Gok'eh             |                        | ✓                   | ✓           | ✓                      | ✓                               |
| Water Supply/Water Management<br>Tu Seets'ehâi/K'ehodih                       |                        | ✓                   | ✓           |                        |                                 |
| Solid and Hazardous Waste Management<br>T'ahsii Móoneji K'ehodih              | ✓                      | ✓                   | ✓           | ✓                      |                                 |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| Airstrip<br>Elá K'et'ah Nanedéh Gok'éh            | ✓ |   |   | ✓ | ✓ |
| Access Roads<br>Ek'élú                            | ✓ | ✓ | ✓ | ✓ | ✓ |
| Temporary Docking Facility<br>Elá Tôgohthe Gok'éh |   | ✓ | ✓ | ✓ | ✓ |
| Seasonal Barge Traffic<br>Godîî Elácho Áatagohthe | ✓ | ✓ | ✓ | ✓ |   |

**TABLE 2: THOR LAKE PROJECT: HYDROMETALLURGICAL PLANT SITE ENVIRONMENTAL ISSUE MATRIX**

Table 2: Thor Lake Godhòh Eghálaæda: Hydrometallurgical godhòh dáóndíh ndéh goch'aodéndíh gha olí.

| Project Component<br>Dáóndíh Eghálaæda                             | Air Quality<br>Zhat'ah | Water Quality<br>Tu | Fish<br>Áue | Wildlife<br>Tich'ahndi | Vegetation<br>T'ahsíi<br>Zhánízheh |
|--|------------------------|---------------------|-------------|------------------------|------------------------------------|
| Site Preparation and Construction<br>Aghálaæda Gok'éh Gots'ehtsi   | ✓                      |                     |             | ✓                      | ✓                                  |
| Hydrometallurgical Plant<br>Tu T'áh Tthe Seets'ehæî<br>Gok'éh      | ✓                      | ✓                   |             | ✓                      | ✓                                  |
| Power Generation (back up)<br>Ek'ak'õð Etâeh Etse Gok'éh           | ✓                      |                     |             | ✓                      | ✓                                  |
| Sewage<br>Tu Nahâadetâ'éh Gok'éh                                   |                        | ✓                   |             |                        |                                    |
| Tailings Containment<br>Tthe Dúyé Met'áh Agot'î<br>K'éhodíh Gok'éh |                        | ✓                   |             | ✓                      |                                    |
| Water Supply/Water Management<br>Tu Seets'ehæî K'éhodíh            |                        | ✓                   |             |                        |                                    |
| Solid and Hazardous Waste Management<br>Tu Seets'ehæî K'éhodíh     | ✓                      |                     |             | ✓                      |                                    |
| Haul Road and Site Access Roads<br>Ek'élú                          | ✓                      | ✓                   |             | ✓                      | ✓                                  |
| Temporary Docking Facility<br>Elá Tôgohthe Gok'éh                  |                        | ✓                   | ✓           | ✓                      | ✓                                  |
| Seasonal Barge Traffic<br>Godîî Elácho Áatagohthe                  | ✓                      | ✓                   | ✓           | ✓                      |                                    |

### English

The assessment determined that for all VECs, with the application of the proposed mitigation measures, the residual environmental effects of the Thor Lake Project were anticipated to be negligible and insignificant. Furthermore, any identified environmental effects were generally limited to the immediate footprints and local study areas of the Nechalacho Mine and Flotation Plant and the Hydrometallurgical Plant and associated infrastructure and most were reversible once activities ceased.

Avalon is confident that with the application of the sound engineering, environmental planning and best management practices described in this Developers Assessment Report, as well as, compliance with anticipated permits, licenses, approvals, existing federal and territorial environmental regulations and guidelines, that the environmental issues associated with the development and operation of the TLP can be effectively addressed and managed.

### Translation

See nezûû gok'eats'enêhta gogháádé tâ'a kí *Thor Lake, Nechalacho Mine, Hydrometallurgical Plant, gots'êh Flotation Plant Site*, godhôn eghálaeda gots'îhæõõ tâ'a kõtá'íé ezhi godhôn ndéh goch'aodéndíh gha íle kegóhthíæð, gots'êh dáóndíh t'áh goch'aodéndíh gha olí tâ'a kí seenagots'æeleh gha godezhí gha íle.

Edi edíhtá'éh zhíéh dáóndíh eghálaæída gha dídi gogháádé tâ'a ká dúle see ehtth'i t'áh dúle godîî eghálaæúdá aeníddhê ká dúle t'ahsíi adehyô megháádé zôn eghálaæúdá nahxéts'edi k'çç ahthít'î gha gots'êh see hotie t'áh zôn ndéh k'eh eghálaæída ts'îhæõõ kí ndéh tsñgúdhi gha íle t'áh dúle godîî eghálaæúdá aeniddhê ahthít'î gha dídi.

### English

#### **Socio-economic Effects**

The Thor Lake Project will provide broad benefits to the economy in terms of employment and government tax revenues. The construction and operation of the Nechalacho Mine and Flotation Plant and Hydrometallurgical Plant will provide a major economic stimulus to the regional communities, the NWT, and the Canadian economy. The Project also offers the opportunity for Aboriginal peoples to have meaningful participation in the wage economy, while also having the work schedule flexibility to accommodate traditional pursuits and activities.

The direct economic effects in the NWT from the construction and 18-year operating life of the Project are estimated to include:

- \$382 million spent in wages and benefits,
- 3,590 person-years of employment,

- \$774 million in territorial government revenues, and
- \$1,229 million in supply purchases.

The direct economic effects across Canada from the construction and 18-year operating life of the Project are estimated to include:

- \$771 million spent in wages and benefits,
- 7,000 person-years of employment,
- \$1,471 million in government revenues, and
- \$3,214 million in supply purchases.

The direct and indirect business opportunities from the TLP have the potential to support infrastructure development that will extend well beyond the initial 20 year project time frame. The demand created for goods and services is expected to increase the capacity of Aboriginal and northern businesses and strengthen the local economy.

Avalon is committed to continue to work with communities to deliver a high level of social, cultural, and environmental accountability and performance. As outlined in Avalon's *Corporate Social Responsibility Road Map* (2011), the Company maintains a strong commitment and a strategic approach to corporate responsibility, which is essential for managing the challenges and opportunities of a rapidly changing global environment. To that end, the Company plans to provide long term employment opportunities, support traditional activities and cultural practices through work scheduling and overall community contributions, and maintain a healthy, safe and productive workplace.

### Translation

#### **Dáóndíh Kōtah gots'êh Sáámba Etsi Goch'aodéndíh Gha Olí**

*Thor Lake* eghálaeda ts'îhæõõ ká kōtâ'íé godlîh t'áh Góhdli Ndéye zhíéh dene nádéh, gots'êh Góhdli Ndéh ts'ç K'aodhe shu sáámba etsi gots'êh eghálaeda ts'êhk'eh goch'aodéndíh gha olí. Nechalacho Mine, Flotation Plant, gots'êh Hydrometallurgical plant gotsi gots'êh ká eghálagenda kéonítthe nidé, ká gots'îhæõõ godhōh køç kázháodénílá, Góhdli Ndéhe, gots'êh Canada adezhō goteh sáámba etsi ts'êhk'eh kōtâ'íé goch'aodéndíh gha olí. Dene kéle amíi nahxegha eghálagenda shu dúle ezhi eghálagenda gogháádé shu godōō edek'çç ndéh k'eh agut'ñ egenidhê nidé, dúle kaget'î gha olí.

Eghálaæeda gotsi gots'êh Góhdli Ndéhe zhíéh hono õõ ets'édîî xaye eghálaæiidá ts'îhæõõ edi kaondíh éhsãã sáámba ts'êhk'eh Góhdli Ndéhe goch'aondéndíh gha olí:

- Eghálaeda: \$382 million.

- Dene adezhô ezhi eghálagîîndá ts'îhæõõ dánét'ée xaye: 3,590 years.

- Góhdli Ndéh ts'ç K'aodhe gots'ç sáámba náæendíh: \$774 million.

- Góhdli Ndéh zhíéh eghálaeda gha t'ahsíi náts'ehndíh: \$1,229 million.

Eghálaæeda gotsi gots'êh Góhdli Ndéhe zhíéh hono õõ ets'édîî xaye eghálaæiidá ts'îhæõõ edi kaondíh éhsãã sáámba ts'êhk'eh Canada adezhô goch'aondéndíh gha olí:

- Eghálaeda: \$771 million.

- Dene adezhô ezhi eghálagîîndá ts'îhæõõ dánét'ée xaye: 7,000 years.

- Sáámba Nálée gots'ç sáámba náæendíh: \$1,471 million.

- Góhdli Ndéh zhíéh eghálaeda gha t'ahsíi náts'ehndíh: \$3,214 million.

Adezhô t'áh ká ôki hono xaye ôôts'ç éhsãã gots'îhæõõ t'ahsíi met'áots'edehthi ts'enéhno gha olí. Dene Kéle gots'êh gonáá dene gúlíi shu amíi adeggha xalagededa t'áh eghálagídéhke naxéh eghálagenda ts'îhæõõ kõtá'íé zhudee agejá olí.

Dúh gots'êh zhundaa gha ká k'éndaa godîî eghálaæúdá aeníddhê godhôn køç kázhádénílá, gots'êh dene ezhi názhádéh dene dáóndíh azhágî't'e goæedúchá gots'êh nezûû goxéh eghálaæúdá aeníddhê t'áh éhsãã ezhi godhôn eghálaæúdá aeníddhê. Ezhi dâhshu, see nezûû ehxoidih t'áh zôh éhsãã ezhi eghálaæída gha. Dúh xaye gogha dáóndíh eghálaæída gha dídi t'áh edîhtá'éh thítsi, *Avalon's Corporate Social Responsibility Map (2012)*, úzhe zhíéh dáóndíh see nezûû edexoidih t'áh zôh éhsãã Thor Lake godhôn eghálaæída gha dídi gha zôh éhsãã ezhi godhôn eghálaæída gha. Ezhi ghááde tá'a godîî eghálaæúdá aeníddhê godhôn køç kázhádénílá dáódenésø gots'ç dúle goxéh eghálaæída gots'ç éhsãã goxéh eghálaæída gha, gots'êh ezhi shu ezhi gots'êh dene amíi naxéh eghálaæídéh gha, see nezûû t'áh t'ahsáagendeh goch'ãã gogha kexoedih t'áh zôh éhsãã gogha eghálaeda thíæô.

### English

#### Closure and Reclamation

Reclamation planning is an integral component of a sound environmental management system for any development. Avalon is committed to achieving a number of goals for the progressive

reclamation of the development area following closure of the Project. Avalon's goals for reclamation will be consistent with INAC's guidelines for abandonment and restoration planning for mines as well as the requirements of the anticipated Land Use Permit

### Translation

#### **Eghálaeda Anaxüt'e gots'êh Godîi Eghálats'îîndá Godhòh Ndéh Seenagots'eleh**

Naxegha t'á godîi Ndéh k'eh eghálats'îîndá, ezhi eghálats'îîndá godhéh dágondíh agøht'e îîle çht'e anagots'eleh t'áh zòh goch'ââ nats'edetâa t'a kòtá'íé naxegha met'áodéæá. T'ahsíi sáanéht'e gháádé eghálaæída gháádé éhtsãã kaondíh k'egúæah gha. See nezûu gots'êh ehtth'i t'áh zòh éhsaãa edi t'ahsíi kaondíh gha Sáamba Nálée gogha Dene Ts'êhk'eh Eghálaeda (INAC), Edîhtá'éh Ndedhé gháádé ahthít'î gha. Ká ezhi godhòh ndéh t'áh ahthít'î gha edîhtá'éh naxeghõt'ô nidé, mezhíéh daondíh t'áh zòh dúle hotie t'áh ezhi ndéh t'áh ahthít'î gha góæò mezhíéh daatá'éh gháádé shu éhsãã nezûu gots'êh ehtth'i ahthít'î gha.