

FACT SHEET

AVALON RARE EARTH METALS' THOR LAKE PROJECT

Background

The Avalon Nechalacho Rare Earth Element Project (Nechalacho) is a proposal to mine, mill and concentrate rare earth elements. It consists of two primary components: an underground mine and a hydrometallurgical (hydromet) plant.

The proposed underground mine is to be located 100 kilometers southeast of Yellowknife, just north of Great Slave Lake. Avalon is planning for a 20-year mine life on 14.5 million tonnes of mining reserves. Currently indicated mineral resources are 57.49 million tonnes. There is an additional 226.88 million tonnes of inferred mineral resources that Avalon has indicated could extend the mine life.

The Nechalacho mine will include a 150-person camp, flotation plant, airstrip, concentrate storage site, tailings management facility, seasonal dock facility and fuel storage. Avalon also proposes to build a hydromet facility at the old Pine Point site in the South Slave Region. The hydromet facility would further concentrate the rare earth elements before they are processed into a marketable form.



The mine and hydromet plant are currently undergoing an environmental assessment. If regulatory approvals are provided in 2013, construction can begin the second quarter of 2013 and mine operations the fourth quarter of 2014. The hydromet plant would be operational by the third Quarter of 2015 and rare earth products would enter the markets by early 2016.

Market Demand

With the development of three mines in Canada (Nechalacho, Great Western and Quest Rare Minerals), it is expected by 2015 the world supply and demand for rare earth elements will balance at approximately 210,000 tonnes. Canadian mines are critical to the global market. Avalon is attracting considerable foreign investment interest due to the tight control of rare earth elements exported from China.

There is high demand for the less available heavy rare earth elements, which are expected to continue to command higher market prices. The Nechalacho deposit is enriched in heavy rare earth elements. Rare earth elements are used in a wide range of many modern everyday technologies including the magnets for electric motors, televisions, computer screens, rechargeable batteries, LED lights, cell phones and wind turbines.

Economic Opportunities

Construction of the mine and flotation plant will require 80 full-time positions, and once the mine is operational it will employ an estimated 216 full-time employees.

Construction of the hydromet plant will require 87 full-time positions, and once operational, it will employ approximately 69 full-time positions.

Table 1: Estimated Economic Impacts Over the Life of the Thor Lake Mine Site (NWT specific)

		Gross Domestic Product (\$ Million)	Labour Wages (\$ Million)	Employment (Person Years)
CONSTRUCTION:	Direct Effect	133.2	127.9	1,474
	Indirect Effect	4.5	2.9	39
	Induced Effect	36.5	21.0	254
	Subtotal	174.2	151.7	1,767
OPERATIONS:	Direct Effect	3,309.7	569.3	6,461
	Indirect Effect	34.8	22.7	271
	Induced Effect	165.4	94.9	1,151
	Subtotal	3,509.9	687.0	7,883
TOTAL:		3,684.1	838.7	9,651

Table 2: Estimated Economic Impacts Over the Life of the Hydrometallurgical Facility (NWT specific)

		Gross Domestic Product (\$ Million)	Labour Wages (\$ Million)	Employment (Person Years)
CONSTRUCTION:	Direct Effect	46.0	43.8	518
	Indirect Effect	1.8	1.1	15
	Induced Effect	12.6	7.2	87
	Subtotal	60.3	52.1	620
OPERATIONS:	Direct Effect	621.8	123.5	1,237
	Indirect Effect	16.5	9.8	138
	Induced Effect	36.2	20.8	252
	Subtotal	674.4	154.0	1,628
TOTAL:		734.8	206.1	2,248

Tables 1 and 2: (1) Source: GNWT Input-Output Model (2) Numbers may not sum due to rounding (3) Estimated total costs were obtained from Avalon and were based on the updated prefeasibility study for the project – News release July 7, 2011 (4) Project costs included the capital and operation expenditures from technical report NI 43-101, Table 1-2. (5) Based on technical report NI 43-101 and information from Avalon, these costs were allocated to either the Thor Lake mine site, or the hydrometallurgical facility. (6) Direct Effect refers to the immediate benefits (ex: jobs and income) created by the project; Indirect Effects are the benefits (ex: job and income) that occur in other businesses in the community that supply a project; Induced Effects are the effects of spending by the households in the local economy as the result of direct and indirect benefits from a project. For example, the induced effects arise when employees who are working for the project spend their new income in the community.

Benefits of Avalon's Hydromet Operating in the Northwest Territories (NWT)

The South Slave Region could see annual benefits from the hydromet between \$37.7 to \$53.8 million, of which an estimated \$8 million would be wages.

Services to the hydromet in the South Slave Region could conceivably represent an additional \$10.6 million.

27,000 tonnes per year of limestone will be required by the hydromet, at an estimated cost of \$10 to \$12 million a year if it is sourced in the Region.

Gasoline, diesel and other petroleum gases expenditures for the hydromet will be approximately \$6.9 million per year.

Amount paid as taxes over the total life of the mine is \$502 million.

The NWT could substantially benefit from development of the mine and hydromet. These developments could also help realize broader objectives such as: ensure new investment in the NWT, diversification of the NWT's economy, establishment of a non-precious metals secondary processing industry in the territory, facilitation of economic growth in the South Slave Region, and maximization of territorial economic opportunities.

Overview of Key Components

Hydro

The hydromet requires 3 to 3.5 megawatts (MW) of hydro. Current hydro availability from the Taltson Dam is estimated at 5 MW.

Supply of Reagents

The Kátlodééche First Nation, supported by the Department of Industry, Tourism and Investment, is conducting a market feasibility assessment to determine market demand for limestone to support developing a quarry business.

Transportation

Based on the tonnage that Avalon is predicting, the GNWT has no concerns with the volume or frequency of the loads on NWT highways. \$8.9 million has been allocated to reconstruct and surface sections of Highways 5 and 6, which will then be better equipped to handle Avalon's transportation needs.

Aboriginal Participation

Avalon has signed separate Negotiation Agreements with the Lutsel K'e Dene First Nation, Yellowknives Dene First Nation and Deninu Ku'e First Nation, providing the basis for the negotiations towards Accommodation Agreements, otherwise known as Impact and Benefit Agreements.

Avalon has initiated discussions with the Tlicho Government and other Aboriginal organizations toward their participation in the project.

Avalon is working with the federal and territorial governments to map Aboriginal business opportunities in the project.