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Avalon's worst-case rare earths prefeasibility proves positive

Avalon Rare Metals (AVL-T) president Don Bubar is reminding investors and analysts that the $899.7-million price tag to develop Canada's first rare earth element mine - the Nechalocho project near Thor Lake, NWT, -- is just a prefeasibility study number.

Bubar says there's a lot of room for optimization going forward for the 2,000-tonne-per-day operation with an 18-year mine life located 100 km southeast of Yellowknife.

"Despite that big number our analysis has produced some pretty positive results," Bubar says. "It's something close to worst-case scenario so if it stands up as positive given those realities, it's good news."

The prefeasibility study, which included a 22% contingency, gives the Nechalocho project an after tax internal rate of return of 12%, net cash flow of $1.5 billion and a net present value of $540 million.

The cost to build the mine, mill and hydrometallurgical plant was estimated at $589.3 million while the remaining costs include contingency, sustaining capital, reclamation and engineering, procurement, construction and management.

Average operating costs were put at $267 per tonne of ore mined or $5.93 per kg of product.

The 18-year mine life was based on proven and probable reserves of 12 million tonnes grading 1.7% total rare earth oxides (TREO) plus 3.16% zirconium oxide, 0.41% niobium oxide and 0.041% tantalum oxide.

"The initial thing that caught my eye and a lot of yes was the capital cost. It's a fairly significant number," says Barry Allan, a senior mining analyst at Mackie Research Capital in Toronto. "Now I realize three was a lot of padding and I think that reflects the newness of the rare earth space in the mining industry."

About 95% of the world's rare earths are supplied by China but the country has been cutting back on exports over the last couple of years creating supply risk for end users elsewhere in the world and opportunity for juniors looking to develop projects.

"This is new ground for the investment community and we are all learning as we go on how to make this business work," Bubar says. "It's happening because the market needs these materials."

Rare earths are the key metals needed for powerful magnets used in hybrid cars, flat screen TVs and clean technologies related to renewable energy.

Avalon has a lot of room for expansion and Allan expects that to show up in the feasibility study.

"There's no doubt that Avalon has a project of quite large size even though the initial production base is reasonably modest," Allan says.

The Basal zone has a total of 90 million tonnes of resources but only 12 million tonnes of reserves are considered for the 18-year mine life. Allan expects the company will add to reserves after the 2010 drilling season.

"My expectation, subject to the availability of the market to accommodate the concentrate produced by Avalon, is that there would be an expansion down the road, beyond the 2,000 tonnes per day," Allan says.

Much of the initial costs were related to infrastructure, he says, so an expansion wouldn't be as expensive.

Construction would take 24 to 30 months and right now the company is looking at a start up goal of 2015.

Avalon's market share of total rare earth demand is forecast at less than 3% initially at 5,000 tonnes per year TREO, moving up to less than 5% at 10,000 tonnes per day full production.