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Avalon Rare Metals Inc: Moving Toward a Development Decision

A Monday Morning Musing from Mickey the Mercenary Geologist

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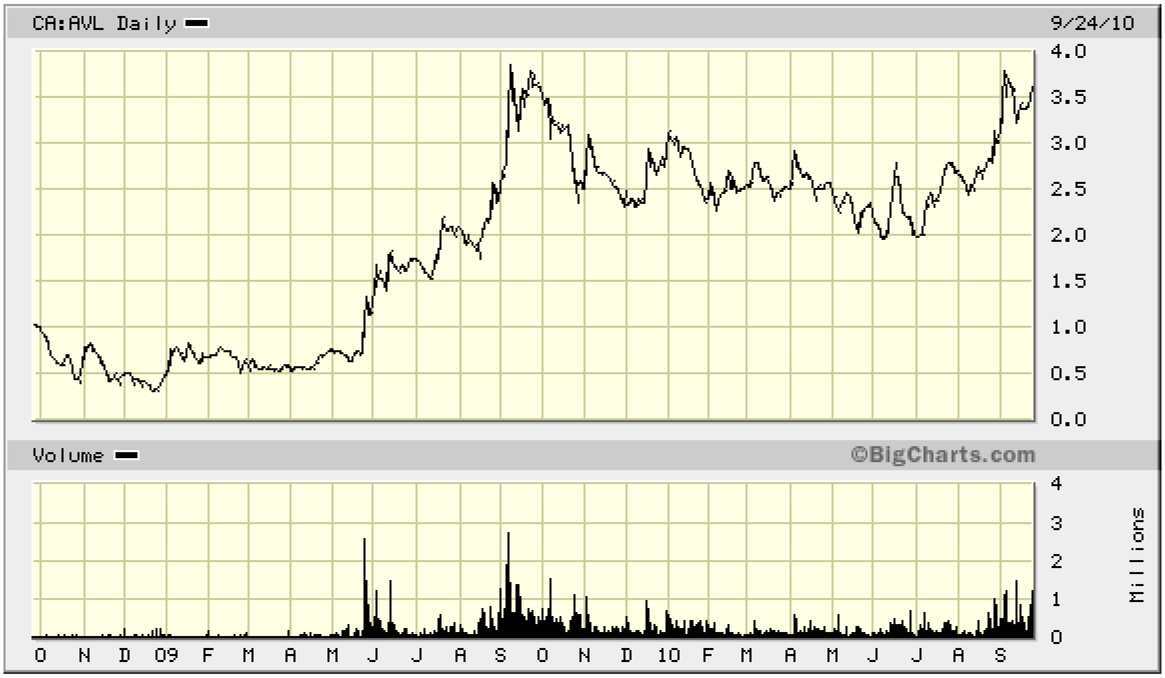
Avalon Rare Metals Inc (AVL.T) is a company that I have covered since June 2007 with a commissioned report on behalf of a private equity fund by my friend and colleague, Rich Radez, well-known for his semi-annual Chicago Resource Expo.

I was invited by Rich to evaluate AVL on a field tour of one of its three “flagship projects”, a hard rock lithium play in northern Ontario. That project did little to garner my interest but another one that CEO Don Bubar discussed in his power point presentation that morning over breakfast certainly grabbed my attention: Thor Lake, an advanced rare earth element play located 100 km southeast of Yellowknife in the Northwest Territories.

Since that sunny day on Rainy Lake near Kenora, Ontario, I have followed and written about Avalon both privately and publicly (Mercenary Musings: September 1, 2008; November 3, 2009). This is the fourth in a series of yearly comprehensive reviews on the company. My positive prejudice is evident as I am a shareholder of AVL.T and it pays a fee to be a sponsor of my website. I am a committed investor in Avalon Rare Metals.

Avalon traded at $1.00 in early September 2008. During the global economic crisis coupled with tax loss selling in mid December 2008, it fell to as low as 51 cents. AVL hit an all time high of $4.24 a year ago, dipped as low as $1.89 in late May, and closed on Friday at $3.63. Speculators that follow my investing philosophy have had ample opportunity to buy low and sell high as AVL has followed the ebb and flow of the speculative REE market. Here is the two year chart for Avalon Rare Metals Inc:



Avalon's share structure is basically the same as my last dedicated musing in early November but that will soon change as detailed below. There are currently 79.1 million shares outstanding and 88.8 million fully diluted. Market capitalization is about $285 million and working capital is $7.0 million. The company recently announced a 30 day price reduction from $3.00 to $2.51 for 3.3 million warrants due to expire in over a year. These warrants are now solidly in the money and could raise an additional $8.3 million with minor share dilution by September 30.

AVL has gone to the market recently by signing an underwriting agreement with a syndicate led by CIBC World Markets Inc and including Laurentian Bank Securities Inc., Stonecap Securities Inc., and Canaccord Genuity Corp. These underwriters have agreed to purchase of 9.2 million units of the Company at $3.25 per unit for gross proceeds of $30 million. Each unit consists of one common share and a one-half share purchase warrant at $3.60. This closing also is scheduled for September 30.

When the public offering is closed, Avalon Rare Metals Inc will have 90.4 million shares outstanding and 103.0 million shares fully diluted. Working capital will be at least $40 million. If the price-reduced warrants are all exercised, the company will have $45.3 million, enough to carry it thru its bankable feasibility study estimated at $43 million.

I have been fortunate to visit Avalon's flagship Thor Lake project twice, in the early summer of 2008 and the mid-summer of 2009. The first excursion was a quick multi-analyst tour while the second was a three day on-the-ground affair that allowed me to delve deeply into the rocks, the core, and the data with both company and expert consulting geologists. In my opinion, the Nechalacho deposit at Thor Lake has potential to be a world-class rare earth element deposit.

Avalon is progressing rapidly at Thor Lake. Since my second musing last fall, it announced final winter drill results, a new resource estimate on Nechalacho, comprehensive bench-scale metallurgical results, a preliminary feasibility study, and completion of an airstrip at the site. The mine permitting process was started in April and an environmental impact assessment commenced in May. In early September Avalon announced another update of its resource estimate incorporating the results of the 2010 winter drilling program.

AVL's prefeasibility study was a very positive step in its progression toward a development decision and was the first economic analysis produced by any North American REE explorer. Pilot plant evaluation of the flotation process metallurgy will commence this fall and pilot plant work on the hydrometallurgical flow sheet in early 2011. Recently the company let a contract to SNC Lavalin for a scoping study for an REE separation plant. This study will evaluate the engineering, economics, and markets for producing value-added, separated rare earth oxides. Currently there is no plant anywhere in the world outside of China that can separate the HREOs.

The most recent resource upgraded additional material into the indicated category in the Basal Zone and defined a higher grade subzone of mineralization in the West Long Lake area. Current indicated resources stand at 20.45 million tonnes grading 1.75% TREO with 23% HREO/TREO**.** Furthermore, the Basal Zone in the West Long Lake area contains a high grade sub-zone defined by applying a higher cut-off grade at $600. This yields 1.87 million tonnes grading 2.19% TREO, with 28.8% HREO/TREO, 4.29% Zirconium Oxide, 0.50% Niobium Oxide and 0.06% Tantalum Oxide. Additions to this high grade sub-zone are anticipated from the 2010 summer drilling program.

The increase in indicated resources in the Basal Zone will have a positive effect on the economics of the project by extending the mine life used in the financial model. The higher grade sub-zone in the West Long Lake is located adjacent to the planned access ramp and can be selectively mined immediately after start-up. This will benefit the project economics with increased revenue during the early years of production.

Besides advancing the Thor Lake project, Avalon added to its management team over the past year as it progresses from exploration to a development decision, mine permitting, and financing.

New personnel include: Director Phil Fontaine, past National Chief of the Assembly of First Nations; Director David Connelly, a Yellowknife-based economic strategy consultant with experience in international banking, business development, aboriginal issues, and First Nation corporations; Director Hari Panday, an international banker based in Toronto with strong financial contacts in southern Asia; Vice-President of Operations David Swisher, a mining engineer with over 25 years of underground and surface mining experience in metals and industrial minerals including in the Canadian North; Vice-President of Sales and Marketing Pierre Neatby, with metals, industrial minerals, and chemical sales, marketing, and trading experience; Finley Bakker, Senior Resource Geologist with over 30 years experience in mining, exploration, and resource modeling, and Investor Relations Consultant Ron Malashewski with experience in engineering, business development, and corporate communications. The company anticipates that additional engineering staff will be added in the near future.

Let's take a look at the pre-feasibility study and what it means for the potential economics and future decisions on the Thor Lake project mine development and financing.

After the inevitable delays that seem par for the course with any and all economic studies by junior resource companies, the Nechalacho pre-feasibility study was released on June 21, 2010. The market was none too pleased with the results. The stock rose with a new resource estimate and anticipation of the study from a close of $1.98 on June 10 to $2.79 on June 17. It immediately went south and within six trading days had given back all of its gains. Note however, that it never traded below its June 10 close, and that suggests that weak hands, traders, and speculators were washed out.

Analysts and pundits were nearly unanimous in their opinions: The capital expenditures for development of Nechalacho were higher than expected and the internal rate of return was lower than hoped. I must admit that upon initially reading thru the release in a quick perusal and seeing $589 million in initial capex and $900 million life of mine with a 12% internal rate of return using an 8% discount, I too was disappointed with the financial analysis results.

But I also noted that the report was done by the contracted consultants, Scott Wilson Roscoe Postle and Associates in a professional fashion, using industry standard best practices, and employing conservative engineering and economic assumptions. I found no attempt to pull any of the financial tricks that lesser junior resource companies are notorious for when presenting the base case economics of a mineral deposit, such as a zero discount rate or only showing before tax IRR.

However, they did use higher REE prices than existed at the time study was prepared. Industry consensus is that China's tightening control on supplies will lead to inevitable price increases. This has proven to be a valid assumption since many rare earth oxide prices are already higher than the 2014 price forecast model used in the study.

There was some confusion among analysts about the REE price assumptions used in the prefeasibility study. The price model applies a discount of 25-50% to separated oxide prices to account for the product being mixed oxides with further treatment required to create broadly saleable products. Scott Wilson et al were quite conservative in the product pricing model using $21.94/kg for the average separated oxide price. It should be noted that current average separated oxide price is actually $32.70/kg.

I would expect nothing less than a technically competent and conservative approach from a team of geologists, engineers, metallurgists, and market analysts assembled and led by Avalon's top man, Don Bubar. I first met Don in 1993 and since mid-2007 have gained a high degree of respect for his professionalism, honesty, forthrightness, and capability as a CEO.

After letting the dust settle for a couple of weeks, I requested a call from Don and we talked for nearly an hour and a half on a Friday evening. He led me thru the financial portion of the Avalon's latest power point presentation which I encourage my readers to peruse. We discussed the pre-feasibility study in detail and I asked numerous direct and pointed questions.

Folks, I came away with a new understanding of what this study did and did not address with respect to the potential economics of Nechalacho. There are various options and opportunities to decrease capex, lower operating costs, improve recoveries, increase net cash flow, and achieve faster payback of capital.

Some options are relatively low risk, with good chances of implementation, and could substantially lower operating costs. They include:

- Start full production at the final mine/mill design versus a three year ramp up.
- Selective mining of higher grade subzones to increase initial grade.
- Buyout of 3% net smelter returns.
- Reduction of power costs by 10%.

According to the company, these items alone could increase the pre-tax IRR to 25%, NPV from $246 million to $730 million, and increase net cash flow by 40%.

Other higher risk scenarios include a 10% increase in metal prices, relocation of the hydrometallurgical plant outside the Northwest Territories, and higher metal recoveries than achieved in bench scale tests.

Prefeasibility Opportunity Analysis

AVALON RARE METALS INC.
TSX:AVL OTCQX:AVARF

		Pre-Tax Analysis (in millions)			
Optimization Initiative	Risk to Impliment	IRR	NPV @ 8%	NPV @ 10%	NCF
Scott Wilson RPA Cashflow Model	N/A	14%	428	246	2,091
Reduce 3 year Production Ramp-up	None	22%	778	569	2,584
Selective Mining in first 5 years to increase grade	None	16%	518	327	2,236
Buy-out Calibras/Lutoda NSR	Low	15%	472	282	2,196
10% Reduction of Power Costs	Low	14%	441	257	2,119
TOTAL Low Risk Results	**None/Low**	**25%**	**961**	**730**	**2,917**
10% Increase in Metal Prices	Medium	17%	651	430	2,638
Relocation of HydroMet outside NWT	Medium	16%	552	355	2,330
1% Improvement in HydroMet Recoveries	Medium	15%	455	268	2,156
OVERALL TOTAL	**All**	**33%**	**1,400**	**1,102**	**3,882**

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As Avalon pointed out in a recent Industry and Information Bulletin, the price of individual rare earth element oxides has increased from 22% to 750% since January 2010 with an average increase of the 10 commonly traded REEs of approximately 300%. Much of these price increases occurred after Avalon's pre-feasibility study was released.

The price increases are largely attributed to Chinese announcements restricting exports and establishing producer export quotas, implementing government policies to control private and unauthorized mines that produce South China HREE-rich ionic clays, requiring stricter environmental regulations, and requiring foreign companies to move factories to China to process oxides into metals and alloys and manufacture end products.

I doubt these prices are sustainable particularly for the lower priced, much more common, and higher usage LREEs that have had the highest relative increases.

Current shortages and higher prices have been bullish for junior REE explorers of merit.

A recent catalyst for the sector was Molycorp's (MCP.NYSE) successful initial public offering on the New York Stock Exchange on July 29 valued at $394 million. This event undoubtedly has increased American public awareness and retail investment in REE space. Although its stock dropped about 15% to $12.10 immediately following the IPO, MCP has rebounded nicely since mid August, and at one time set new highs for 10 of 11 trading sessions. After a two day correction in mid-September, it has gone on another big run, reaching a new high today at $27.81.

The recent tensions over the detention of a Chinese fisherman involved in an incident with two Japanese coast guard boats in disputed territory has resulted in suspension of Chinese REE exports to Japan. This dispute has become headline news in North America, attracted retail buying by US investors, and contributed to the surge in REE stock prices for the best companies.

Besides the on-going geopolitical intrigue in the sector, the next anticipated catalysts for Avalon Rare Metals are results from the separation plant scoping study, another updated resource estimate that includes drilling from this summer's program on high grade basal zone mineralization on the southwest flank of the deposit, and a new economic development model incorporating this data.

Avalon Rare Metals Inc is the most advanced of the rare earth element exploration companies on the Toronto Stock Exchanges. Its prefeasibility study has served us a preliminary idea of the economics of the Nechalacho deposit and given the company a variety of options to lower capital expenditures and operating costs.

Certainly the team at Avalon has many challenges remaining before a bankable feasibility study is delivered in mid 2012, a development decision is made, financing is procured, and a mine is built at Thor Lake. However, with the recent $30 bought deal financing, the company now is fully funded to complete its bankable feasibility study. In my opinion, CEO Bubar has positioned the company to meet the development challenges including:

- Maintaining a relatively low number of shares outstanding for an advanced exploration project moving toward a development decision.
- Attracting a large institutional base to provide access to significant capital.
- Recent hiring of personnel with expertise in mine development, operations, financing, sales and marketing, native issues and negotiations, and business development in northern Canada.
- An on-going employment and social awareness program to include and consult with local natives in the development and permitting process and negotiate their stake holding in the deposit.

I have repeatedly stated that rare earth element mines will not be built and operate under the usual economic models for profitability and rate of return. The financial reward in this market is downstream in the supply chain with magnet manufacturing and end product uses. I do not think that major mining companies will enter the sector with the standard junior resource company takeover or project buy-out. Instead, the market will operate on long term off-take contracts, strategic alliances with entities that require a secure supply of REEs, and/or consolidation of existing players with synergies in REE space.

The next 12 months will be an exciting time as Avalon Rare Metals Inc proceeds with pilot plant metallurgical processing, continuing exploration, condemnation drilling of ground for infrastructure, and mine permitting. It will continue to pursue strategic alliances and/or off-take contracts with manufacturers, end product-users, or perhaps a business combination with a specialty metal miner or downstream fabricator. In addition it will commission and commence a bankable feasibility study.

I look forward to continuing to update you on the progress of this very interesting and compelling company as it progresses toward a mine development decision.

As always, if you are intrigued by Avalon Rare Metals Inc, do your own research and determine if it fits your model for a speculative investment of merit.

Ciao for now,

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The **Mercenary Geologist Michael S. "Mickey" Fulp** is a Certified Professional Geologist with a B.Sc. Earth Sciences with honor from the University of Tulsa, and M.Sc. Geology from the University of New Mexico. Mickey has 30 years experience as an exploration geologist searching for economic deposits of base and precious metals, industrial minerals, uranium, coal, oil and gas, and water in North and South America, Europe, and Asia.

Mickey has worked for junior explorers, major mining companies, private companies, and investors as a consulting economic geologist for the past 22 years, specializing in geological mapping, property evaluation, and business development. In addition to Mickey's professional credentials and experience, he is high-altitude proficient, and is bilingual in English and Spanish. From 2003 to 2006, he made four outcrop ore discoveries in Peru, Nevada, Chile, and British Columbia.

Mickey is well-known throughout the mining and exploration community due to his ongoing work as an analyst, newsletter writer, and speaker.

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