Today’s Notes:

1. Rare Earths
2. Senesco Technologies (SNT AMEX)

1. RARE EARTHS: SMART PHONES TO SMART BOMBS

*For China, the embargo on rare earth shipments has provided at least some geopolitical leverage.*


The New York Times reported yesterday that China has now decided it will resume shipping its full quota of rare earth minerals (REE). China had abruptly curtailed shipping these critical, “not-really-rare” but “difficult-to-find-and-develop-in-economic-quantity” minerals. The press is all abuzz about the fact that China controls most (95%) of these minerals.

Legislators on Capitol Hill are in frenzy. Their fear was magnified by yesterday’s announcement that China has a supercomputer 1.6 times faster than the fastest US computer.

China is simply flexing her muscles while tending to her national interests and geopolitical goals including, most important, the buildup of her military. As her REE exports declined and global demand is surging. Such is the ascent of the new millennial “critical mineral,” now geopolitical assets. Neodymium one of the more important heavy REEs is now priced at $40,000 /tonne in China and $80,000 per tonne outside of China. Lanthanum sells for less than $4,500 a ton in China, but up to 10 times that much outside China because of the export restrictions. The diagram below depicts the Chinese pricing advantage in the REE space. Is anyone listening in Washington? U.S. and Canadian natural resource legislation is now crucial.

![Diagram of Chinese pricing advantage in the REE space]

The New York Times reports, “Under this year’s quota — 30,300 metric tons of authorized shipments — only a few thousand metric tons remain to be exported in 2010. Meanwhile, annual demand outside China for raw rare earths approaches 50,000 tons, according to industry estimates.”
The current rare earth issue was raised to the US Secretary of State level when Secretary Hillary Clinton intervened yesterday and said that China’s embargo was a “wake-up call and that both countries would have to find alternative sources of rare earth materials”

![Graph: Making Rare Earth Scarce]

Is this a sign of the times? Are we destined to decline because we have not secured capital and the will to develop all our natural resources? Most people forget that this country prospered in large part because of the Mining Law of 1872, much disparaged today.

Canadians and Americans have always reacted to these challenges. Sometimes we need a good poke to wake up as Secretary Clinton has noted. To set the record straight it is important to recognize that China developed its rare earth monopoly because the Chinese government supported development of these deposits when the development was not economic. They then looked the other way at the environmental mess it created. As China’s command economy pushed development of its rare earth mines the rest of the world’s REEs such, for example Molycorp’s light rare earth deposit, became uneconomic. Punitive mining legislation in this country, popular under Arizona’s Rep. Grijalva will depress development of our natural resource legacy at a time when geopolitical consequences are significant.

China’s actions however provide a good lesson that demonstrates the power of domestic natural resource development. There is expanding demand for the rare earth minerals particularly the “heavy” rare earth elements. Canadian Mining entrepreneurs have a number of developments that we have reviewed in the past including Avalon’s Thor Lake, Quest Uranium’s Strange Lake and Commerce’s Elk Creek. We particularly like the development of Stans Energy’s (RUU TSXV) Kutessay II in Kyrgyzstan, a REE deposit fully developed by the Russians in the 1980s and since mothballed. We own shares in that company.
There are several early and advanced rare earth Discovery projects in the pipeline. These will not be in production for a few years but there are rare earth deposits outside of China.

In addition a number of research organizations (materials scientists at MIT for example: See MIT Technology Review) are working on substitute materials for the rare earths. The area of nanotechnology will ultimately pay off. Contrary to Secretary Clinton’s wishes though that success is far from assured and is likely years down the road. One of the great characteristics of rare earths is that they are light in weight and powerful for magnets and engine and military technology. China itself has noted that its rare earth monopoly will run down in 10 to 15 years based on domestic demand and current known reserves.

What we desperately need in Washington is a natural resource development policy. We must bring together the economic interests of the extractive industries, the environmental interest and the employment and tax considerations of local and state governments wrapped in the cloak of our national security and infrastructure development. Both national security and infrastructure development needs are considerable and will require domestic natural resource development. The Canadian oil sands, for example, are a Godsend to the US supplying 1.2 million barrels of oil per day even though much despised by many in Washington. Instead we have CNOOC investing $3 billion in the booming Eagle Ford shale oil and gas play in Texas. We would be in real trouble in the US without the oil supplied by our Canadian neighbours. The same will ultimately hold for rare earth minerals and undoubtedly extend to 22 other minerals that are now imported 100%.

Think about these issues. They will become increasingly frequent headlines. In 1941 Japan went to war to secure her critical metal and energy pipeline. Plus ça change, plus c’est la même chose.
2. SENESCO: ON TO THE CANCER CLINIC

I have been fielding many requests for information on Senesco Technologies because the share price has been in constant decline. Today I write on the company. I own a significant position in the company and continue to believe in the technology and the new management team. Most recently the company completed a management restructuring and a financing that will support it through its Phase IB / 2A cancer trials at the Mayo Clinic. The company notes that it has $8 million on its balance sheet. It is in the process of submitting an IND for its cancer trials which I believe will be approved by the FDA. I believe that the company will be in the cancer clinic in human multiple myeloma trials early in 2011.

The company’s Factor 5A1 therapy combines a DNA plasmid (which increase the lysine Factor 5A – expresses the cancer cell death message), with an siRNA (lowers hypusine factor - eliminates survival messages to cancer cell) and a PEI nanoencapsulation for delivery of the therapy. We are confident that given success in animal models this has a real chance for success in the upcoming Mayo Clinic trials on patients with Multiple Myeloma.

My concern is that in 2010 the shares have declined precipitously on fairly heavy volume. The company believes that success in the clinic will rectify this problem. However we would like to see the company’s new management team more aggressively communicate to explain its progress on development of the therapy. We think the Senesco IP, including its many successes and licenses in the agricultural space are worth significantly more than the current share price. Senesco, based only on its share price and not its considerable IP, is somewhat of a contrarian play. There is no doubt the company will need to refill it cash coffers by the end of next year. Might we suggest to management that it would be better to do that at a higher share price level?
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