

Today's Notes:

1. Security of Supply (Chris Berry. MBA)

Security of Supply – A Crucial Need - Two Case Studies

We write today from Shenzhen, China where we have been asked to present on various topics including the outlook for vanadium, how to find red flags in junior resource investing companies, Discovery Investing, and the geopolitics of oil and gas.

I was last in Shenzhen in 2007 witnessing the economic miracle that we read so much about unfolding before my eyes. What was described to me as a “fishing village” 25 or 30 years ago has maintained an explosive growth rate to become one of the largest cities in China. Recent estimates show that there are over 100 cities in China with a population of over 1,000,000 and Shenzhen comes in at roughly 10.3 million.



While there are clearly more people moving around, in 2007 cars were the dominant form of transport here followed by bicycles. As I sit here today, likely the biggest change I have seen is that those pedaled bikes I noticed four short years ago have all been replaced by electric bikes. There are likely a number of reasons for this – status, mobility, increased disposable income; this change serves to validate our Discovery thesis of a rising quality of life and the need for resources to underpin that yearning.

Seeing so many e-bikes got me thinking about the numerous e-bike manufacturers and what worries them most in terms of competing and being able to offer a product to a burgeoning population. Most critical here is security of supply. When I mention this, I'm referring to the security of the supply of raw materials used to manufacture the bikes (steel, lithium, etc). With respect to the lithium used in the bike battery, not only must a mining company be able to guarantee the steady supply of lithium (lithium carbonate in this case), but also a high degree of purity. Metallurgists at many companies involved in the production of industrial

metals are likely kept awake at night by phrases such as “four nines” or “five nines”. This, of course refers to the purity of the end product and if a company can’t deliver a product that meets an end user’s highly specific criteria, potential for off-take agreements and cash flow could be erased. This is what many investors in the rare earth space are currently overlooking. While grade, tonnage, geopolitics, and metallurgy are all very important, purity of the end product is also vital and one of the “last steps” for graduation of a junior mining company to the ranks of “producer.”

We’ve seen two recent examples of mining companies and end users working together to erase the uncertainties surrounding security and certainty of supply. First, Talison Lithium (TLH:TSX), a stock we own, has just signed a Memorandum of Understanding (MOU) with Sojitz, the Japanese trading firm involved in the machinery, energy, metals, and materials businesses. According to the press release:

“Sojitz is interested in accessing an additional supply of lithium chemicals to support its customers in the rapidly growing lithium-ion battery market in Japan.”

Talison has publicly stated its intention to build a mineral conversion plant so the company can produce up to 20,000 tons per annum(tpa) of lithium carbonate and capture more of the value chain. So the MOU serves two purposes: first, Sojitz can establish a closer relationship with one of the top lithium mining companies in the world in order to increase its penetration of lithium product sales in Japan. Second, Talison can now move forward on construction of its mineral conversion plant with the knowledge that at least one end user can aid in establishing relationships with Japanese end users of lithium carbonate. Japan is reported to be one of the largest markets in the world for lithium carbonate, so Talison’s push to produce its own “brand” (by 2015), if you will, seems to be a wise strategic decision.

The second example of mining companies and end users working together concerns Frontier Rare Earths (FRO:TSX) and Korea Resources Corp (KORES), the Korean state run mining investment company. Frontier is currently exploring for rare earth elements on its Zandkopsdrift project in South Africa near Cape Town. This agreement between the two companies will accelerate the development of the Zandkopsdrift project and will allow KORES the security of supply we mentioned above that is so vital to end users. Frontier plans on producing 20,000 tpa of separated rare earths by 2015. KORES will also form a consortium of companies to help in this joint venture including Samsung, Hyundai Motors, GS Group, Daweoo Shipbuilding and Marine Engineering, and AJU Group – so it’s not just state run forms concerned with security of supply. The private sector is obviously as well. There are many details to this agreement between the companies including off-take details, but we will not belabor them here as the agreement serves to illustrate our point about security of supply being of paramount importance.

Which brings us back to the sweeping changes we see in cities like Shenzhen, throughout China and in many other parts of the world. As these changes continue, the next time you see an e-bike or a “lifestyle” product remember that the companies involved in the manufacture and sale of those goods are focused on security of supply and purity of product. These are facts that all junior mining companies should take heed of and all Discovery Investors remember when conducting due diligence on a company.

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