CRITICAL
STRATEGIC METALS

Volume 2 - Issue #3 March ~ 2011

Your monthly guide to the latest information on the world's strategic metals

As Rare Earths Get Rarer...

China's role in the global rare earth market needs little introduction. China's restrictive trade policies have forced the rest of the world to rethink their own policies and explore rare earth resources in nations other than China. The governments of the US and certain European nations are trying to develop various strategies to secure their supply of rare earth metals.

Recycling and stockpiling are two options being considered as ways to hold rising prices and ease supply shortages. Urban mining is the new recycling buzzword. It involves the extraction of rare earths from e-waste. However, recycling is expensive and complex. Director General Ian Hetherington of the British Metals Recycling Association (BMRA) said, "The widespread use of these metals is a relatively recent phenomenon, and so there is not a significant amount recovered through (Waste Electrical and Electronic Equipment) recycling. Currently, recovering these materials can be costly and only produces very small quantities, making it uneconomical." He did add that the situation could change over the next decade.

The European Commission (EC) is investing about $23 million on research to improve underground technologies and to find substitutes for rare earths. The EC hopes to improve recycling techniques and make it economically viable. Germany, Japan and the US are working on recycling technologies too. Large players such as Hitachi and Mitsubishi are working to make recycling a viable option.

China, on the other hand, plans to build a national stockpile of rare earths and that would naturally push prices upwards. China also intends to change its status from being a net exporter to a net importer of rare earth metals. Such a move is likely to further lower China's export quota and squeeze the global supply even more.

Chen Zhanheng, director of the Chinese Society of Rare Earths said, "(There are) early signals that China is moving from sell-side to buy-side. China becomes a new market opportunity for producers outside China."

James T. Areddy of The Wall Street Journal says, "The reports say storage facilities built in recent months in the Chinese province of Inner Mongolia can hold more than the 39,813 metric tons China exported last year… Chinese state media reports say stockpiles may eventually top 100,000 metric tons."

The US reportedly has the world's second largest rare earth deposits but extraction facilities are still under development. Emily Coppel, an American Security Project research assistant said, "The U.S. will need to develop new technologies and invest in mining operations to solve the long-term supply problem. In the short-term, stockpiling rare earths metals is one of the best ways to prepare for a future shortage until these new mines and technologies become available."

Other organizations have however spoken against stockpiling and instead support research in recycling, solar power equipment, wind turbines and electric cars. Robert Jaffe, Professor at Massachusetts Institute of Technology, said, "We do not recommend economic stockpiling which we believe is a disincentive to innovation and has backfired in the past. After all, many of these elements are not even found in significant deposits in the United States so mining independence doesn't even make sense."

Other supply options being discussed are development of rare earth substitutes and international cooperation. Experts suggest that if nations join hands to develop new mines, they could reduce their dependence on China's monopoly.

China's unofficial ban on rare earth shipments to Japan last year forced the rest of the world to view China with considerable suspicion. Looking for alternate sources became a necessity. China's neighbors Japan and South Korea have already begun stockpiling rare earth metals. In fact, South Korea plans to spend up to $15 million by 2016 to build a stockpile of about 1,200 tonnes.

In October last year, Japan's Prime Minister Naoto Kan said, "Stockpiling is one option we need to consider. While Japan is trying to secure supplies from countries other than China, establishing those agreements may take some time."

Efforts to undermine China's dominance are underway in South Africa as well. Canada's Great Western Minerals Group expects to produce about 2,700 tonnes per year of rare earth metals from its Steenkampskraal mine in South Africa. Chief executive Jim Engdahl said, "The big opportunity here that people haven't recognized is that China will become a net importer by 2014/15. We believe South Africa will become one of the leaders in this industry outside of China."

Japan has also expressed considerable interest in developing South Africa's rare earth industry among other sectors.

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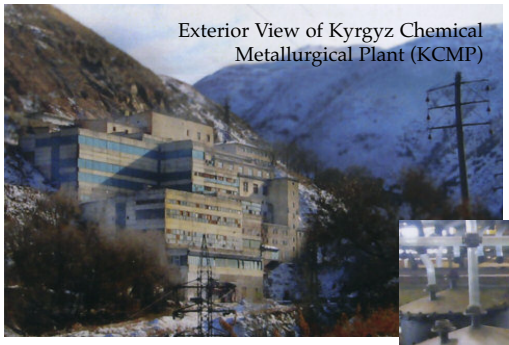
Rare Earth Monopoly Coming to an End

Canada based Stans Energy Corporation is currently focused on developing mining properties in Kyrgyzstan. The company acquired the mining license for the past-producing Kutessay II rare earth mine in October 2009 and is now gathering and analyzing its historical data. Kutessay II along with the Kyrgyz Chemical Metallurgical Plant (KCMP) was the Soviet Union's most advanced mining properties at one time. It supplied 80% of the nation's rare earth metals for 30 years from 1960 to 1991. The mine was shut down in 1991 because of a fall in rare earth prices.



Exterior View of Kyrgyz Chemical Metallurgical Plant (KCMP)

According to 1996 estimates, Kutessay II has over 20 million tonnes of rare earth metals (0.22–0.30% TEM range). This former open pit mine contains reserves of 15 rare earth metals that were earlier refined to produce 120 rare earths compounds. KCMP is supported by good infrastructure in terms of a railway line, qualified labor and steady power supply.

In January this year, Stans Energy announced that it had reached an agreement with the majority owners of KCMP to purchase 100% of the rare earth processing complex. Since the mine was a previously functioning mine, Stans Energy can save both time and money before beginning production. The company now owns the only past-producing heavy rare earth elements (HREE) outside China. With a 25-year mining license, Stans Energy is the only foreign company in Kyrgyzstan with a mining license.

Mining is a vital part of Kyrgyzstan's economy so Stans Energy's efforts have a lot of support from the government and citizens. Experts are of the opinion that Stans Energy is suitably positioned to create a promising non-Chinese rare earth resource.

California based Molycorp Minerals is on a similar path. It is reopening the Mountain Pass rare earth mine that operated for 50 years before it was shut down in 2002. Molycorp purchased the property in 2008 and spent the last couple of years studying and analyzing the mine. Interested parties predict that Molycorp Minerals could soon be a supplier of rare earth metals to China. Japan's Sumitomo Corporation is providing $100 million of the $531 million required to complete the project. The company plans to begin operations by producing about 3,000 tonnes of rare earth metals initially and reach 20,000 tonnes by 2012. The final production rate is expected to reach 40,000 tonnes per year.

Interior View of Kyrgyz Chemical Metallurgical Plant (KCMP)

Australia's Lynas is another company that is ready to begin rare earth production. The company plans to begin initial operations later this year with the production of 11,000 tonnes per year. Production rates are expected to reach 22,000 tonnes per year by 2012. Andrew Sullivan, an analyst at BBY Limited said, "Lynas is in a good position because it signed a number of sales agreements. It definitely has first-mover advantage for Western or non-Chinese rare earths users that are looking to diversify. The same could be said about Molycorp. It's got agreements in place for quite a bit of its production."

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The Long View

An In-Depth Interview with Larry Reaugh, CEO of American Manganese Inc.

Anthony David: Looking back over your 48 years in the mining industry, what would you count as your greatest success prior to the current companies you're working with?

Larry Reaugh: Well, in '86 Reaugh Gold discovered a high grade silver zone with our partner Minova which eventually turned out to be one of the highest grade silver mines in North America. It was massive sulfide which went into production 1989. It was only in production for about four and a half years because it was a million tons of high grade and we had a 600 Tonne/day operation. Price of silver unfortunately was sliding, and I imagine there's more resources there today but that was my biggest success.

Larry Reaugh
CEO of American Manganese Inc.

Anthony: So what was your biggest project prior to American Manganese?

Larry: That would be the Ruby Creek Project with Adanac Molybdenum. That was a property I put into the company at my cost which was a few thousand dollars and we built that up to a shovel-ready project. Early 2008, there was a change in management and I found myself on the outside looking in, and we know where that project is today.

Anthony: So what did you do after Adanac Molybdenum?

Larry: At that time I moved on to search for a viable manganese project; I was doing that with American Manganese in 2007. Since then we've amassed all the Artillery Peak deposits and it's the first time all of the deposits have been held by one company.

Anthony: So who owned it before American Manganese?

Larry: There were four or five patent holders, which contained most of the resources. We had to do separate deals, but we did get it all together during a time when nobody was looking at manganese. Since that time, we've completed several drill programs and have an indicated 43-101 resource of approximately 6.7 billion pounds with an inferred resource of 8.96 billion pounds. We've only drilled about 20% of the property, so the chances to double or triple the resource is definitely there.

Anthony: And what's your per pound cost?

Larry: We've had a NI43-101 preliminary economic evaluation which would indicate that we could be the lowest cost producer in the world at approximately 45 cents a pound. And currently China's cost is about a dollar before a 20% export duty.

Anthony: It's a rare thing these days to hear that anyone can produce anything at less than half the cost of China... yours is a very rare case in this day and age.

Larry: I'll tell you why that is. We owe most of our success to the fact that the US Bureau of Mines wanted to make the US less dependent on imports and they had low grade deposits in the US, so they tested them all. Artillery Peak came out way above everybody else as far as being amenable to a very low-cost process of getting the metal out through a sulfurous acid process. Carbonates in China cannot use sulphurous acid and the high grades can't. Manganese percolated out in the sea beds through the sandstones and the manganese actually holds the sandstone together.

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Anthony: So what sets your recovery process apart from anyone else?

Larry: The rapid recovery time and high recoveries >90%. I was listening to the president of Kemetco and he reported that eight minutes for 85% and 35 minutes for 95%. So our recoveries are rapid and we have high recoveries. All the other processes that are used to produce manganese are lucky to get 60% - they have very cost-intensive front-ends. Once they get down to the electroplating, we're all on the same playing field. It's takes the the same amount of power to produce a pound of metal in the US as it does in South Africa or China. So it's the front-end. We're very fortunate with this project – everything just kind of falls into place for it as you move through the process.

And that's interesting because China controls 97-98% of the world production of manganese. Now those numbers are pretty close to what they control on the rare earths as well and we've all seen what's happened in the rare earths. Our company will benefit at some time because according to the Arizona Geological Survey publication in 1991 – "the manganese deposits of the Artillery manganese district are the largest and perhaps only significant group of manganese deposits in the United States."

Anthony: So Artillery Peak really puts you in the catbird seat.

Larry: Yes, and we've initiated 43-101 pre-feasibility studies with wardrop engineering as well as pilot plant testing with. Kemetco, along with our people, have developed a patentable extraction process. We've applied for the patent and we are presenting a paper on the process at the SME conference on March 2nd of this year.

Anthony: So all of these elements seem to add up to a project which really sets you apart from competing manganese projects.

Larry: That's right.

Anthony: So would you say that American Manganese could become the most profitable public company you've ever been involved with?

Larry: Certainly dollar value in the ground is the largest, but it's only about 15% of the size of the Adanac project that we advanced to the start of construction. Permits were there, the final feasibility was done, even the design engineering was about 80% complete and all the long lead items were ordered. In that case, the market cap for that project was $750 million of which I am happy to say $80 million of that was a bridge loan and there was another $650 million lined up behind that in a bond issue. It was coming together nicely before I left.

Anthony: What was Adanac's median price when you were first starting out?

Larry: At one time, it was 10-30¢.

Anthony: So it multiplied approximately 10 to 30 times?

Larry: As soon as molybdenum became a household word, and "The Molybdenum Fund" was set up by Eric Sprott, it drew a lot of attention to the moly space and everything went through the roof. At our peak we were trading at $2.90/share with a market cap of 300 million.

Anthony: So you're expecting a similar scenario to come about for American Manganese?

Larry: Well this project is about 15% the size, but it's the most robust project I've ever had. It'll pay back at $1.10 manganese in 1.7 years. At today's current prices, the project could be paid back in little over a year. And the Capital Cost is estimated between $90-100 million.

We raised that much just to take the Ruby Creek project to a construction stage. We feel its well within the company's ability to raise that money – we have a track record for being able to do so and we could put it into production. Now interestingly, the free world uses about 250,000-300,000 tonnes of this material per year. That's roughly 550-650 million pounds a year and we'll be producing 50,000 tonnes or around 110 million pounds. And with the initial resources we have, we could have a 20 year mine life at five times that number and produce all the free world's manganese needs.

Anthony: That's pretty impressive.

Larry: I think this is by far the most exciting and best project I've ever worked on.

Anthony: You have a history of picking the sleeper metals before they gain mass popularity don't you?

Larry: Well, it's a tough grind when you pick a commodity that's not popular – you know, not in the mainstream, educating the public – and we were the first company with a molybdenum project in late 2003. By the end of 2004 there were maybe four or five companies and today, there's got to be about 1000 or 1500 that have a moly or moly-copper project.

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Anthony: Do you see the same thing happening with manganese?

Larry: Yes, I definitely see the same sort of movement. Certainly the Australians know all about manganese and they've been a major exporter to China for years, but here in North America, it's a metal which people are just beginning to understand.

Anthony: And you've shared your fundamental view of metal markets through an intermittent newsletter of the same name over the past few years. When did you publish the first one?

Larry: In the bottom of the market in 2008. I wrote it November 2008 and put it out early December and I said this was the best buying opportunity that you'll ever see in the markets and as it turns out, it was. I mean there were major companies in there like Tech Cominco that were trading down at $3-4 that are up in the $50 range now. There are other companies that were trading at 20-30 cents that are now trading at 8, 10, 12 dollars. My fundamental view was that China wasn't going to stop and they were going to keep eating up all the world's metal resources and this had to drive the price up – it was an inevitable consequence of their actions.

Anthony: So in essence your fundamental view is that prices will rise due to China and other BRIC nations; that it's inevitable prices will be driven up for everyone.

Larry: That's right and it's going to continue. It's not an overnight thing – this is a super bull market and the last time we had one was in the 60s up to the 80s...

Anthony: Because of the boomer generation and their rising affluence?

Larry: Well that was when we were, commercializing the cities and everybody was moving from rural farming areas to major cities in North America, Europe and Japan and that fueled a super bull market for metals for quite some time. Now we're seeing this happen again with emerging countries and five times the population.

Anthony: Two and a half billion people...

Larry: Essentially 5 times the effected population as the last cycle.

Anthony: So did you start your newsletter to educate people about the metals they should be paying attention to?

Larry: No, it was really to give my view as a CEO. Many companies have been in the metal markets here for over 30 years and you know we all have certain views and we have certain projections and we all have to look forward in the market. We can't just look at the everyday chaotic nuances of the market. And at the time I had been asked questions about what I thought was going to happen and everybody was panicking so I looked at it from a fundamental point of view. It took me about six weeks of intensive research to really establish in my mind that that this was the bottom of the trough.

Anthony: It was certainly a low point for a lot of investors.

Larry: And I strongly felt that it was the time to be buying, the time to be getting in. I told everyone to not give up hope...it always takes time...investors will come in and companies get financed a year later. So it's usually not a rapid turnaround, but if they can hang in there, they can ride out these types of troughs.

Anthony: You have been interviewed by other big institutions a few years ago, as well right?

Larry: Yes, I became part of a survey with the Federal Bank here in Canada and I gave them my views at the time and my views have played out pretty accurately since. I basically told them you couldn't take their charts and put it in the mirror and say that's what it's going to look like going ahead. There are many different influences out there that we've never seen exerting themselves on the market. And I stick pretty much to the metals. Metals I understand.

Anthony: Because they're commodities like everything else.

Larry: Yes, certainly when you have a countries the size of China and India with about 2.5 billion people between them, who want what we take for granted over here – you know, two cars, TVs, home, and holidays, and houses in the country. When this starts happening in a country like China and India, they need a lot of commodities.

Anthony: I completely agree. So what are Western governments doing about strategic metals and the growing undersupply? Do you feel they are doing enough? How do you see them from your perspective?

Larry: Well, the EU and the United States are certainly making a lot of noise about it and they're blaming China for all of the shortages that are developing. You know China is a growing country so they will look after China first. They're not going to say we're going to cut this and cut that so you can have their products like rare earths or eventually manganese. The reality is

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they're running out of many metals in China. The days are coming to the end where they export manganese metal and we all have to do something about getting production underway outside of China. That's what we're doing.

Anthony: American Manganese has had a pretty good start for the year. Can you describe what's been happening since January 1?

Larry: Well, the stock has tripled. We've loaded up the treasuries. We're well funded to move this project through almost to the production decision stage especially when the warrants get exercised. But what's really happened is there's a sudden awareness that critical metals are as important as rare earths. I feel the current level of awareness for critical metals is going to intensify this year. Critical metals will take the stage in front of everything else as far as the hot investment of the year.

What does that do for us? Well, here's a way to help us raise the money to get into production and it gives our shareholders a good return. So you know, it's nice to see, I said in my letter that specialty metals will be next in the super cycle, that was back in August 2009 and of course you know it took almost two years, or at least a year and a half for sure before it really started to catch on. It started to catch on right at the end of the year and it's accelerating. I think the investment community and certainly the mining houses themselves and brokerage firms are recognizing that critical metals are going to be important investment opportunities for their clients this year.

Anthony: Have you been approached by other companies in regards to offtake agreements?

Larry: We've had several approaches from some very substantial companies on offtake agreements but nobody wants to put up any money. And we feel we've taken all the risk. My fundamental view is that the price of manganese will probably triple in the next two years which would be around the time when we're getting close to production and I wouldn't want to set up an offtake in a weak position right now. After all, I don't see the benefit of doing an offtake agreement on a product which is in short supply unless somebody wants to share the risk and so far that hasn't happened. After the pre-feasibility study I feel that may become more prevalent and we may end up with a strategic partner which would not hurt the shareholders or American Manganese and would give a lot more credibility to the project. Our recent bought deal with Laurentian Bank Securities out of Montreal certainly signals confidence in the company and what we're doing.

Anthony: So when do you expect to be fully financed so you can move ahead into production?

Larry: We're moving now. We have enough money to advance us through this year and through half of the second year. What that does for us is it speeds up our drilling program. We could build up this resource to double or triple its current size because we've only touched about 20% of the property – you can see the potential in some of the mesas there. You can see 100 feet thick sections of manganese which have never been drilled. We don't know the grade, but that will come with further drilling. You've got to remember, with our process, we can mine down to less than 1% manganese and make money.

Anthony: And the patented process you created is very green and earth friendly, right?

Larry: Yes, it's a totally closed circuit. We won't have tailings ponds, we have a dry tailings. We've already tested the tailings – it's inert. We'll be using belt presses to extract the water so we have a clean project which is also very water and energy efficient. So all these elements are certainly pointing the way for a green process. We'll be reclaiming as we're mining.

Anthony: If there was one thought you'd like to leave my readers with, what would it be?

Larry: Take the fundamental view on what's happening out there. There's always going to be people taking profits off the table – people buying at 30, 35, 40, and 45, and 50¢ and they think they're going to lose their profits and sell and that's not necessarily a good idea as you may be selling at the bottom. Over the longer term I feel the markets will be strong. It may take a little bit longer, but people should realize that China's still growing, India's still growing, Brazil's still growing, and Russia's still growing, and as such, prices of commodities are inevitably going to rise.

You can learn more about American Manganese Inc. at:

www.AmericanManganeseInc.com

Or you can read Larry Reaugh's Fundamental View of Metals Markets Newletters by visiting:

http://www.goldrea.com/reacompanies/list/index.php?chc=4