

Rare Earth Metals—Not Your Father's Mining Biz: Byron King

The Critical Metals Report

01/31/2012

COMPANIES MENTIONED

- IBC Advanced Alloys Corp.
- Stans Energy Corp.
- Ucore Rare Metals Inc.

The non-Chinese rare earth metals sector is not dying, insists Byron King, editor of *Outstanding Investments* and *Energy & Scarcity Investor*. However, a rare earth miner's path to success significantly differs from the precious metals game. In this exclusive interview with *The Critical Metals Report*, King explains what makes this market distinct for producers and investors alike and offers winning strategies for both camps.

Source: [Brian Sylvester of *The Critical Metals Report*](#)

The Critical Metals Report: No year has brought higher highs and lower lows to the rare earth space than 2011. Do you expect the same volatility in 2012?

Byron King: The short answer is yes. In this market, anything is possible. In 2011 we saw highs toward the beginning of the year because there was a lot of enthusiasm for the technology metals space. We experienced lows towards the end of 2011 because there was a general market selloff. It didn't matter if you were stock-picking. The falling tide sucked everything down.

Looking ahead into 2012, the good plays are going to see brand-new highs. But along with that good news for a select number of plays, we'll likely see a shakeout of companies that haven't put their business plans firmly on the rails.

TCMR: There was a time when you could plug in a rare earth land package into a shell company, change the name to something that included the words "rare earths," conduct an initial public offering and watch the share price climb. Those days seem to be over. It's about survival right now. Is this just the natural evolution of this subsector, or is it dying?

BK: The non-Chinese rare earth sector is not dying. In fact, the non-Chinese rare earth sector is established, and now it needs to survive. It needs to grow. It needs to prosper. The world cannot afford for the non-Chinese rare earth sector not to make it.

The rare earth space is at the point of separating out the stock promoters from the company builders and serious managers. The broad economy, and of course the stock market, needs company builders with strategic vision.

Rare earth miners are distinct from gold miners, who don't really care what ultimately happens to the gold they produce. That is, if you mine gold, it could wind up in a gold bar, a gold coin or a gold dental filling. But rare earth miners need to know where those rare earth atoms are going to wind up. Are they going to wind up as zeolite catalyst in an oil refinery, or as part of a battery pack of an electric car, if not a battery in a cell phone or a computer? The rare earth miner is putting the initial raw material into an entire, distinct production chain that needs to be understood from the refining and processing to the end user.

Streetwise Reports LLC

101 Second St., Suite 110

Petaluma, CA 94952

Tel.: (707) 981-8999 x311

Fax: (707) 981-8998

jluther@streetwisereports.com

THE ENERGY REPORT

THE GOLD REPORT

THE CRITICAL METALS REPORT

TCMR: If the rare earth element (REE) sector is to succeed, REEs will likely need to find their way into more everyday products. However, without a readily available and relatively inexpensive supply of REEs, that doesn't seem likely to happen.

BK: It's an unfortunate fact that the problematic supply situation and price spikes of the past two years or so caused an awful lot of research and development (R&D) for future applications to be defunded. Without assured supply, many companies don't want to do R&D for applications that can't get basic inputs.

At the same time, there's a lot of talk about substituting or engineering around rare earths. That is possible in some cases, but there are certain things for which the atomic properties of a given rare earth atom are utterly unique. People are not going to stop using rare earths in these kinds of apps.

When the user community sees a more assured supply coming downstream, they'll be more confident in using rare earths in larger quantities. I do think people are going to find more and more uses. There's a lot of development for rare earth applications left to be imagined. Even if we stopped dreaming up new ideas for rare earths, just the inertia of where we already are would take us quite a ways.

TCMR: Do you believe companies have to produce rare metal oxides to make a profit? Or can they make money by producing a rare earth concentrate, which would sell at a much lower price?

BK: As with pretty much all mining, the cost per ton is important. There's room for a low-cost company to produce rare earth concentrate and sell it into a more commodity-oriented market. It's going to be tricky. Success would be very company and product specific.

The companies that are going to make the serious gains and profits will make the right kind of deals with the midstream and downstream processors, refiners and end-users.

TCMR: What are the right kinds of deals?

BK: It depends on the rare earth. For example, if a company wanted to sell a light rare earth (LREE) like lanthanum, it would need to get hooked up with the right players in the petroleum refinery catalyst or battery markets.

When it comes to the heavy rare earths (HREES), the highest profit margins appear to be within the lighting phosphors and high-end magnets.

However, companies have to take the rocks on the mining claims as they find them. They can't just dissolve everything in sulfuric acid and sell the liquor to somebody else—that's not going to work. The chemical application has to be specifically geared toward that particular end-use whether it's going to be a lighting phosphor, magnet powder or battery application.

TCMR: [Stans Energy Corp. \(HRE:TSX.V\)](#) has followed the herd lower and its share price is hovering at about \$1. Was its fall just part of what was happening across the board in the REE space?

BK: The Stans pullback was a reflection of broad market trends, in my view. I have followed Stans very closely. There is nothing wrong with Stans! And note my exclamation point!

At one point the share price got down to \$0.55. People were wondering if the company was terminal. My answer was that it's God's way of giving you a buying opportunity. And the stock has doubled over the past month.

My take on things is that Stans is putting midstream and downstream deals together. I am very confident that Stans will succeed in what it's doing with its HREE play. It has an incredible level of technical skills resident in its relationship with the Russian Leading Institute of Chemical Technology, or VNIHT, a Russian laboratory that dates back to the Cold War days of the Soviet Union. VNIHT is filled with brilliant scientists, physicists, engineers and chemists who know how to bring the ore out and separate it into the right elements.

TCMR: Could Stans process the concentrate from other companies' mines or is it more likely to use that processing facility exclusively to its own advantage?

BK: That's getting a bit ahead of where things are right now. But yes, Stans will probably make deals with other companies to process material. Once it gets its own production under control, figures out how its particular chemistry works and trains a cadre of people, Stans will likely wind up with extra capacity available for other players.

TCMR: Do you have any concerns about Stans' operation being based in Kyrgyzstan and Russia?

BK: I've always listened to people when they tell me all about how risky it is to do business in Russia. I accept that. I understand peoples' concerns. But gold, silver, uranium and rare earths are all considered strategic substances in Russia and the laws there make it possible for nationalization to happen.

What is different about Stans' play is the only thing that is physically located in Russia is the intellectual relationship with VNIHT. The ore site itself is in Kyrgyzstan, which is two countries away. The midstream and downstream users are all based elsewhere.

TCMR: What's the upside on that stock?

BK: Stans is at about \$1.10, but within a year it could be a \$5 stock. In a four-year development program, the upside is probably in the \$20 range.

TCMR: Wow. Are there any other REE plays on your radar screen?

BK: There are a number of North American plays in Canada and the U.S. [Ucore Rare Metals Inc. \(UCU:TSX.V; UURAF:OTCQX\)](#) has its principal ore site in Bokan Mountain, Alaska, near the southern end of the Alaska Panhandle. I love the geology and mineralogy at Bokan Mountain. It's extremely mineable.

TCMR: Are you expecting a significant resource upgrade at Bokan Mountain? The company just released its drill results from its 2011 campaign, which included 10,000 meters (m) of drill results that it's going to incorporate into its updated resource estimate. Do you have any idea how big that might get?

BK: I think that this is a very extensive deposit. Lots of nice, clean vein structures. It's very mineable. I'm not worried that the Bokan Mountain play is a flash in the pan. It's quality ore—a 50:50 ratio of heavy rare earths to light rare earths.

TCMR: Do you think the project is more likely to get developed because it's in Alaska?

BK: Yes. The Bokan Mountain district is more likely to get developed for a multitude of reasons. It has a mining legacy and a mining history in terms permitting. It is literally on top of a former mine site. There's an old uranium mine almost right next door to it. There is immensely good local and state support. There is no human habitation nearby. The footprint is also extremely small.

TCMR: [IBC Advanced Alloys Corp. \(IB:TSX.V; AALF:OTCQX\)](#) makes unique copper alloy and beryllium-aluminum alloys used in aerospace and defense applications. You like "off the beaten path" metals stories. Do you know anything about this one?

BK: I've been following IBC Alloys for about a year. I came to it not as a basic resource play, because it purchases beryllium from U.S. stockpiles and Kazakhstan, but because I was very impressed with the technical and the engineering skills of what it does with the beryllium and how it does it.

The company supplies high-end apps in aerospace and high-end technology niches. But IBC is also trying to bring beryllium into a more consumerist marketplace, such as automotive applications, because beryllium is lightweight, strong and absorbs vibration really well. If it can crack the automotive market, IBC is looking at entire train cars full of product.

IBC Alloys is also a very advanced company in terms of its work with the nuclear fuels business. Beryllium and uranium can be mixed to create stronger nuclear fuel rods with a higher melting point and different heat-flow capacity. The rods are still in the R&D phase, but the U.S. Nuclear Regulatory Commission is already very interested, as is the nuclear power community. The company also has partnerships with companies like General Electric Co. and Hitachi.

TCMR: Is this a misunderstood story? The share price has lagged despite its promising products and advanced research.

BK: It's an underfollowed story—and to the extent that it is followed, it's misunderstood. Part of it is just the general disrespect by the market, which is barely paying for fundamentals. I mean, there are a lot of companies out there that are selling for cash value or less.

TCMR: What about the critical metal graphite?

BK: I'm fabulously bullish on graphite. It's the next industrial revolution. Graphite is going to become a part of people's lives in a way we can barely conceive. A lot of people's knowledge of graphite begins and ends with the No. 2 lead pencil, but there's graphite everywhere.

In fact, I am speaking to you over an iPhone. The only reason that it's not burning my hand to shreds is that there is a graphite membrane that dissipates heat from the battery. Graphite doesn't burn until 3,000 degrees Celsius, which is above the melting point of steel. If wire bundles or structural steel is wrapped inside of graphite membranes, it's essentially fireproofed.

The applications that we're seeing for graphite are mushrooming, from the iPad to

the Boeing 787 Dreamliner, to other mundane but critical applications like fire retardants and suppression systems.

And that's just plain graphite. That doesn't get into the other angles of graphite, such as carbon nanotubes, which are long, skinny, rod-like pieces of carbon that are immensely strong. A half-inch-thick piece of plastic impregnated with carbon nanotubes has the strength of six inches of armor plate.

And then there's graphene, an incredible leap of modern technology. Graphene can be used in computer chips as opposed to silicon. This makes the chips smaller, lighter and more power efficient and heat absorbent.

Silicon's uses over the past 50 years have grown, but we are approaching the atomic limits of what can be done with it. The next step is graphene, and the chip-making industry knows this. It's a quiet revolution, for competitive reasons. But it's a revolution in the making.

Also, I should add that graphene could be added to steel to make a super metal. Graphene-steel could be 200 times stronger than what we know today. These are just some of the technology leaps that are coming down the road.

TCMR: Are there many companies where investors can easily gain exposure to graphite and these technological advances?

BK: There are some niche companies that I talk about in *Energy & Scarcity Investor*. There are also some larger companies in the space such as Nippon Carbon Co. Ltd. (5302:JP), China Carbon Graphite Group Inc. (CHGI:OTCBB), SGL Group (SGLFF:OTCPK) and others. One company that I just released out to my subscribers has been in the carbon business since 1886. They supplied graphite to the first reactor that Enrico Fermi built at the University of Chicago in 1942. They supplied the graphite that went into the Manhattan Project reactors at Oak Ridge, Tenn., and in Hanford, Wash. One-sixth of this company's employees have a Ph.D. in physics or chemistry. This company is very high-tech, research-oriented, with lots of astonishing applications coming down the pipeline.

If readers are interested, I'm offering a [sample of this issue](#) of *Outstanding Investments*.

TCMR: Do you have any parting thoughts for us on the critical metals space?

BK: I'd like to emphasize the difference between mining traditional metals and the new technology metals. This is not your father's mining biz anymore. Today you need a strong downstream focus, including strong business and technical relationships with the processors, refiners and end-users.

In examining companies, investors should look at the entire process chain all the way down to the consumer product that is manufactured. If the guy who owns the mine and the mill up in the mountains doesn't have a relationship with the midstream processors, downstream refiners and end-user manufacturers, it's just not going to work. That's one of the great warnings that I give to anybody who's thinking of jumping in. Even then, this is a difficult space in which to navigate. But the up-side could be phenomenal.

TCMR: Thank you.

Byron King is the resident energy and natural resource expert at Agora Financial, LLC. A geologist by training, he worked for the former Gulf Oil Co. and has followed oil industry developments for over 30 years. King's career path also took him into the U.S. Navy, both in active duty and reserve. In the 1990s and 2000s, King engaged in a vigorous private law practice. For the past five years, King has been writing about energy and natural resource issues for an international audience. Currently, King writes and edits two major publications, Outstanding Investments and Energy & Scarcity Investor. He holds degrees from Harvard, the U.S. Naval War College and the University of Pittsburgh.

Read more about Byron's big graphite play in a [complimentary issue](#) of his award-winning newsletter, *Outstanding Investments*.

Want to read more exclusive *Critical Metals Report* articles like this? [Sign up](#) for our free e-newsletter, and you'll learn when new articles have been published. To see a list of recent interviews with industry analysts and commentators and learn more about critical metals companies, visit our [Critical Metals Report](#) page.

[The Gold Report](#) : [The Energy Report](#) : [The Critical Metals Report](#)

IMPORTANT DISCLOSURES

- 1) Brian Sylvester of *The Critical Metals Report* conducted this interview. He personally and/or his family own shares of the following companies mentioned in this interview: None.
 - 2) The following companies mentioned in the interview are sponsors of *The Critical Metals Report*: Stans Energy Corp and Ucore Rare Metals Inc.
 - 3) Byron King: I personally and/or my family own shares of the following companies mentioned in this interview: None. I personally and/or my family am paid by the following companies mentioned in this interview: None. I was not paid by Streetwise for participating in this story.
- The Gold Report* and *The Energy Report* do not render general or specific investment advice and do not endorse or recommend the business, products, services or securities of any industry or company mentioned in this report.

From time to time, Streetwise Reports LLC and its directors, officers, employees or members of their families, as well as persons interviewed for articles on the site, may have a long or short position in securities mentioned and may make purchases and/or sales of those securities in the open market or otherwise.

Streetwise Reports LLC does not guarantee the accuracy or thoroughness of the information reported.

Streetwise Reports LLC receives a fee from companies that are listed on the home page in the "Learn More About Companies in this Issue" section. Their sponsor pages may be considered advertising for the purposes of 18 U.S.C. 1734.

OTHER DISCLOSURES

Streetwise - *The Gold Report* and *The Energy Report* are Copyright © 2011 by Streetwise Reports LLC. All rights are reserved. Streetwise Reports LLC hereby grants an unrestricted license to use or disseminate this copyrighted material (i) only in whole (and always including this disclaimer), but (ii) never in part.