

Update Note //Rare Earths



Progress Report Ucore Rare Metals Inc. – UCU:TSXV

May 19, 2021

We Discuss:

Ucore made 2 important announcements last week:

1. Technology Testing Agreement (TTA) with an unnamed US-Allied-Source feedstock producer
2. Comprehensive update on operation hinting at progress on its Strategic Metals Complex and Bokan Mountain

Jon Hykawy, PhD

President

jon@stormcrow.ca

Tom Chudnovsky

Managing Partner

tom@stormcrow.ca

	New	Old
Recommendation	Watchlist	N/A
Target	Watchlist	N/A

Recent Px	\$1.15
Shares O/S	47.7M
Shares O/S FD	56.9M
Market Cap	\$55M
Est. Cash	\$8.6M



See the end of report for important disclosures



What Happened? Ucore and its wholly-owned subsidiary Innovation Metals (IMC) have released two important press releases over the last two weeks. First, on May 4th Ucore and IMC announced the signing of an agreement with an unnamed rare earth producer located in a nation recognized as friendly to the United States. The agreement, referred to as a “technology testing agreement” or TTA, did not disclose any terms. The goal of the TTA is to complete modeling and testing of Ucore’s RapidSX™ technology on a commercially-available hydrometallurgical rare earth concentrate, with the goal of licensing a separation plant to the producer on favorable terms.

And on May 12th Ucore provided an update that gave strong evidence of support for IMC, the Alaska Strategic Metals Complex and the Bokan Mountain project.

Who is Involved? With respect to the May 4th press release, if we had to guess, there are really only two rare earth producers operating in US-allied nations: Lynas Rare Earths Ltd. and Northern Minerals Limited. Both are headquartered in Australia. Given that Lynas already has a separation plant using conventional solvent extraction technology, we suspect that the unnamed rare earth producer is Northern Minerals which, to date, has only been selling a rare earth concentrate. This TTA seems likely, to us, to be an investigation of moving Northern Minerals, and Ucore along with them, further downstream.

Why Does It Matter? Ucore and Innovation Metals are examining any and all ways of making money with the RapidSX™ technology in the rare earth sector. Ucore might ultimately set up a RapidSX™ plant to process their own material. They could set up a plant to process material from a joint venture with a firm such as Materion. Or they could design and license a RapidSX™ plant to a third party, assuming an amenable deal could be struck that would keep the technology safe and allow for Ucore to make money.

To do the third, you need a group that wants to sell separated and purified rare earths or even more highly processed downstream products, but that doesn’t have their own expertise in separation. And you need to convince them that RapidSX™ can do the job. Having the first group through the door doing exactly this is extremely important. We have previously written that, in our estimation, it’s very likely a RapidSX™ plant will have a large capex advantage compared to standard



SX but maybe not much of a opex advantage. To us, it's unlikely that an existing rare earth producer using conventional SX will shut down their plant and switch to RapidSX™.

But anyone building a new plant, and we believe that there will be a few over the coming years, will need to consider RapidSX™. If the first one out of the gate, Northern Minerals, opts to use RapidSX™, that will likely make RapidSX™ an industry leader and perhaps the default choice for rare earth processing. So this first announcement matters, a lot.

And the second press release, on May 12th, shows that Ucore is spending the funds to develop the RapidSX™ technology properly. Ucore has transferred \$1.9 million to IMC to further commercialize the RapidSX™ technology, and is also financing a third-party investigation of RapidSX™ that should provide greater comfort to both investors and potential partners regarding the advantages of RapidSX™.

In addition, Ucore is continuing to support engineering work on the Alaska Strategic Metals Complex, a key part of any effort to produce separated and purified rare earth oxides or even metals from material harvested anywhere in Alaska or northern Canada. \$750,000 will go some way towards doing the studies required to get the most out of any eventual Alaska SMC.

Finally, Ucore also allocated \$530,000 for further delineation of the Bokan Mountain resource and for work on the mineral processing flowsheet for Bokan. We've made no secret of our opinion that Bokan is not a first-tier asset for rare earths. It's biggest problem is that it is simply too small. But it's also a resource that contains significant amounts of both dysprosium and terbium, rare earths that are fairly essential to the production of magnets to be used under heavy loads, such as in automobile drive applications. If a serious partner wanted to utilize dysprosium and terbium from Bokan, then Ucore needs to know where it is and how much they have, and how to get it out of the rock. So this is money well spent, at this stage.

What Could It Mean, Financially? To be honest, still unclear. There are significant potential advantages to using RapidSX™ beyond just the likely lower capex, including such factors as process speed (which reduces working capital demands) and process reliability (if a power failure or loss of heating/cooling or whatever else knocks a conventional SX plant out of balance, it can take days or weeks to start producing product to



specification again, but a RapidSX™ plant can likely re-establish equilibrium in hours to a day, meaning revenues can start being generated again much more quickly). We assume that both companies will price a licensing agreement with these details in mind. But to know what such an agreement would be worth, we need more information than we have.

And as for continuing to commercialize RapidSX™ and Bokan, there can't be any argument with either one. Current management at Ucore isn't going to pour money into Bokan like it's a bottomless pit, so investors are safe from that mistake, but Ucore also needs its separation technology and a possible captive source of the most valuable rare earths. We are not arguing against either activity.

Conclusion This all amounts to extremely positive news. Companies in the rare earth sector are recognizing that there is potentially large value in the RapidSX™ technology, and Ucore is continuing to develop RapidSX™, the relationship in Alaska and the Alaska SMC and Bokan Mountain. We believe this is only the beginning for Rapid SX™, IMC and, most especially, Ucore. We will keep watching.



Important Disclosures

1. Stormcrow Capital Ltd. ("Stormcrow") is an Exempt Market Dealer registered with the Ontario Securities Commission and the Autorité des marchés financiers (Quebec). Stormcrow has both issuer and investor clients. Stormcrow is also a financial and technical/scientific consultant that provides certain of its clients with some or all of the following services: (i) an assessment of the client's industry, business plans and operations, market positioning, economic situation and prospects; (ii) certain technical and scientific commentary, analysis and advice that is within the expertise of Stormcrow's staff; (iii) advice regarding optimization strategies for the client's business and capital structure; (iv) due diligence investigation services; and (v) opinions regarding the future expected value of the client's or a offeror/offeree's equity securities so as to allow the client to then make capital market, capital budgeting and capital structure plans. With the consent of Stormcrow's issuer client, the client and/or its industry sector may be the subject of an investment or financial research report, newsletter, bulletin or other publication by Stormcrow where such publication is made publicly available at www.stormcrow.ca or elsewhere or is otherwise distributed by Stormcrow. Any such publication is limited to generic, non-tailored advice or opinions and should not be construed as investment advice that is suitable for the reader or recipient. Stormcrow does not offer personalized or tailored investment advice to anyone (other than its current investor clients) and Stormcrow's research reports should not be relied upon by anyone in making any investment decisions. Rather, investors should speak in person with their personal financial advisor(s) to obtain suitable investment advice.
2. The company that is the subject of this report is currently an issuer client of Stormcrow.
3. Stormcrow and/or some of Stormcrow's officers, directors, or significant shareholders and its research analysts **do** own, directly or indirectly, common shares, convertible debt (from May 2020) and finder's warrants (from Feb. 2021) in the company that is the subject of this report. As at the date of this report, Stormcrow and its officers, directors, and significant shareholders beneficially hold an aggregate of less than 1% of the outstanding equity shares of the company that is the subject of this report.
4. Although it is a policy of Stormcrow that Stormcrow and its employees are to refrain from trading in a manner that is contrary to, or inconsistent with, Stormcrow's most recent published investment recommendations or ratings, Stormcrow does permit itself and its employees to sell shares in circumstances where working capital and cash flow requirements of Stormcrow require the sale of securities that would otherwise continue to be held. Any securities currently held by Stormcrow and/or some of Stormcrow's officers, directors, or significant shareholders in the company that is the subject of this report are held for investment purposes and may be sold (or additional shares acquired) in the future depending upon market conditions or other relevant factors.
5. Stormcrow has, within the previous 12 months, provided paid investment banking or consultant services or has acted as a financial intermediary or underwriter to the company that is the subject of this report. Ucore has paid a consulting fee to Stormcrow for its advice and commentary. Ucore also paid a finder's fee to Stormcrow in regard to the investor clients of Stormcrow that participated in Ucore's non-brokered private placement that closed on February 8, 2021.
6. Stormcrow expects that it may provide, within the next 12 months, paid investment banking or consulting services, or that Stormcrow may act as an underwriter to the company that is the subject of this report.
7. Stormcrow intends to provide regular market updates on the affairs of the company that is the subject of this report (at Stormcrow's discretion) and make these updates publicly available at www.stormcrow.ca.
8. All material information used in the publication of this report has been compiled from publicly available sources that Stormcrow believes to be reliable. Stormcrow does not guarantee the accuracy or completeness of the information found in this report and Stormcrow may not have undertaken any independent investigation to confirm or verify such information. Opinions contained in this report represent the true opinion of Stormcrow and the author(s) at the time of publication.
9. The securities described in this research report may not be eligible for sale in all jurisdictions or to certain categories of investors. This report and the content herein should not be construed by anyone as a solicitation to effect, or attempt to effect, any transaction in a security. This document was prepared and was made available for information purposes only and should not be construed as an offer or solicitation for investment in any securities mentioned herein. The securities referred to herein should be considered speculative in nature and should be considered to involve a high amount of financial risk where investors may lose all of their investment.
10. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations. No representation is being made that any investment or security will or is likely to achieve the return or performance estimated herein. There can be sharp differences between expected performance results and the actual results.

Investment Rating Criteria

We do not provide an investment rating, beyond indicating whether the target price exceeds current trading ranges by a reasonable range, indicated as "Positive", or whether the target price is either below or roughly equivalent to the current trading range, indicated as "Negative". Each investor has an individual target return in mind, we leave it to the individual investor to determine how our target and the current price fit in their portfolio.