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Lithium Extraction Technology: Last Best Hope or A False Dawn?

As the commodities markets continue to struggle, I've been outspoken for some time now on the need for companies across the entire value chain to focus on ways to lower costs to remain competitive. While Selling, General, and Administrative (S,G,&A) expenses are likely the easiest places to start "cutting to the bone", there is a limit here. Having a top tier deposit and great management team is no longer enough when you look at the supply gluts for many of the metals mentioned frequently in Investor Intel commentary.

For an aspiring junior mining company to join the ranks of producers in the lithium space, for example, the project will either need to match or beat the financial metrics of the majors. As an example, FMC Corp (FMC:NYSE) has an EBIT margin on their lithium business of approximately 10%. Any lithium junior hoping to be acquired would need to have wider EBIT margins to even be considered. As many of the economics associated with junior mining companies come from economic studies with significant margins of error, this makes possibility of a takeout remote.

So what is a lithium junior mining play to do? The key going forward will be enhancing productivity through lowering production costs. This can be done on a macro scale several ways, typically through a demographic dividend (a larger labor pool producing more goods at a lower cost) or innovation (producing more goods with the same amount of labor).

With respect to the mining sector, at least in the junior space, it appears that my thinking has caught on. In the lithium space alone, some companies either pioneering their own extraction technology or partnering with another entity to push the envelope further including Lithium Americas (LAC:TSX), Stria Lithium (SRA:TSXV), Pure Energy Minerals (PE:TSXV), Nemaska Lithium (NMX:TSXV), Enirgi Group and Simbol Materials (both privately held). We've seen movement in the REEs as well with Ucore Rare Metals (UCU:TSXV) and Geomega (GMA:TSXV) as two examples in the REE space who have decided to forge a path utilizing technology to lower production costs. Some of the goals are designed to increase recovery rates, shorten time to market, reduce the environmental footprint, or reduce energy intensity. All of these goals lower both cap ex and op ex. This is a good thing but raises another set of questions:

How does the extraction technology work? Who has validated it? Has it been used before at scale successfully?

Company management isn't likely to answer the first question in any level of detail, but the second and third questions should provide a great deal of insight into whether or not a new extraction or production technology could be utilized. Much of the technology now being tested isn't new, despite the fact that there's a great deal we don't know. A caveat here is that if these technologies all do what they say they can, you risk flooding the market, driving down raw material prices and bringing us full circle – an oversupplied market and lower returns for producers.

Lithium junior miners embracing technology and strategic partnerships is a positive development and quite frankly one of the only ways to survive the tough markets ahead. I expect these exciting announcements in the Energy Metals space to continue as the industry continues to consolidate and position itself for growth in the long run. Those companies utilizing technology to lower costs or innovating to create their own value chains stand the best chance to success going forward however the technology must be validated. The biggest success stories out over the next three to five years won't re-invent the wheel, but they will improve upon it.

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