# Jack-in-the-Stox: Ucore and the Rare Earth Separation Bottleneck

written by Jack Lifton | July 8, 2026

**In his ongoing *Jack-in-the-Stox* series, Jack Lifton comments on public companies, technologies, capital markets, supply chains and geopolitics. He is not a licensed investment adviser, and his views are provided for informational purposes only. Nothing in this column constitutes investment advice or a recommendation to buy, sell or hold any security.**

For the better part of the last decade, investors have been inundated with "mine-to-magnet" stories. Nearly every rare earth junior claims that it will become a fully integrated producer of everything from ore to finished magnets. It is an attractive narrative because it promises to capture maximum value. It is also, in most cases, unrealistic.

The rare earth business does not need more stories. It needs more industrial capability.

That is why I believe **Ucore Rare Metals Inc. (TSXV: UCU | OTCQX: UURAF)** deserves a closer look.

Unlike many of its competitors, Ucore is not trying to convince investors that it must own every link in the value chain. Instead, it has chosen to concentrate on one of the most difficult and valuable links in the entire rare earth industry: separating mixed rare earth concentrates into the individual

oxides that manufacturers actually purchase as the necessary precursors for making the alloys from which magnets are manufactured.

This distinction is critical. OEMs do not buy mines. They do not even buy rare earth concentrates. They buy qualified materials delivered consistently, on specification, and at prices that allow them to manufacture competitive products. The companies that solve those procurement problems will ultimately determine the shape of the Western rare earth industry.

That has been my view for many years. Mines do not create industries. OEM purchasing decisions create industries. When viewed through that lens, today's competitors become much easier to understand.

**MP Materials Corp. (NYSE: MP)** represents the vertically integrated mining model. It owns one of the world's premier rare earth deposits and has the financial resources to pursue separation, metal production, and magnet manufacturing. That is an ambitious undertaking.

**Energy Fuels Inc. (NYSE American: UUUU | TSX: EFR)** represents a different model altogether. It began with decades of experience in uranium mining, ore beneficiation, and chemical processing. It already understood how to operate complex industrial facilities before entering the rare earth business. Its acquisition of **Australian Strategic Materials Limited's (ASX: ASM)** operating metal and alloy business, followed by the purchase of Vacuumschmelze, the West's premier rare earth magnet manufacturer, demonstrates a strategy built on acquiring proven operating capability rather than inventing it. In my opinion, Energy Fuels is presently the best-positioned American company because it has assembled an industrial system rather than simply a collection of assets.

**USA Rare Earth, Inc. (NASDAQ: USAR)** follows yet another path. It combines ownership of the Round Top and **Serra Verde** deposits with plans for downstream production. There is nothing inherently wrong with that strategy, but investors should remember that resources alone do not produce commercial products. Heavy rare earths acquire value only after they have been separated, purified, converted into metals and alloys, manufactured into magnets, and qualified by customers. Those are difficult industrial milestones, not financial milestones.

Ucore has deliberately chosen another route. It is focused on separation. That may sound less glamorous than mine-to-magnet, but separation remains the greatest technical bottleneck outside China. Mining rare earths is well understood. Beneficiating ore is well understood. Commercial solvent extraction capable of consistently producing high-purity separated oxides remains one of the industry’s greatest challenges.




Recent operating results suggest that Ucore is moving beyond simply demonstrating that its process works. The company has announced that it has successfully produced a 99.9% pure dysprosium oxide sample and delivered that material to a potential customer for evaluation. Investors should not underestimate the importance of that achievement. Producing a high-purity heavy rare earth oxide is one thing; producing material of sufficient quality that a prospective customer is willing to begin qualification is quite another. Customer qualification marks the beginning of laboratory chemistry's transition into commercial reality. OEMs and downstream manufacturers do not purchase process flow sheets—they purchase qualified materials that consistently meet specification.

If Ucore succeeds, it will not need to own the world's best

mine. It will become a processor that many mines need. That business model deserves more attention than it has received, and recent developments reinforce this point.

**Sumitomo Corporation** has invested in **Phoenix Tailings, Inc.**, which aims to establish significant Western production of rare earth metals and alloys. More importantly, Sumitomo has now established a supply chain in which rare earth concentrates are intended to move to Ucore for separation and purification before being delivered to Phoenix Tailings for metallization and alloy production.

Investors should think carefully about what this means. This is not another company announcing that it hopes to manufacture magnets someday. This is the deliberate construction of a specialized industrial supply chain. One company provides feedstock. Ucore performs the separation and purification. Phoenix Tailings produces metals and alloys.

Those materials can then move downstream to magnet manufacturers and ultimately to OEMs.

That is precisely how mature industrial supply chains operate. Each participant specializes in what it does best instead of pretending that vertical integration is the only path to success.

Equally important is the identity of the companies involved.

Sumitomo has spent more than a century building international industrial businesses. It has little interest in promotional narratives and every interest in identifying technologies and partners capable of sustained commercial execution. Its willingness to participate in a supply chain involving Ucore and Phoenix Tailings should be viewed as more than a financial investment. It represents a significant industrial vote of

confidence in the strategy those companies are pursuing.

Taken together, the Sumitomo relationship and the successful production and delivery of a 99.9% pure dysprosium oxide sample tell the same story. Ucore is not merely describing what it hopes to build. It is beginning to demonstrate that it can produce customer-grade materials and integrate into a commercial rare earth supply chain. Those are the milestones that ultimately matter to industrial buyers.

None of this guarantees success.

Commercial chemical processing remains difficult. Solvent extraction plants do not become profitable because they are constructed; they become profitable because they consistently produce specification material at commercial throughput and competitive cost. Investors should judge Ucore by operating results, customer qualifications, throughput, recoveries, production costs, and long-term supply contracts—not by press releases.

That distinction separates Ucore from many of today's mine-to-magnet promotions. Too many companies have spent years announcing ambitious plans to control every step of the rare earth value chain while producing little or no customer-qualified material. Capital markets often reward those announcements because they are easy to understand. Industrial customers do not. Procurement departments cannot build products from PowerPoint presentations or feasibility studies. They buy materials that have been qualified, delivered on time, and priced competitively.

I have often argued that the future of the Western rare earth industry will not be determined by who discovers the next rare earth deposit. It will be determined by who earns the confidence of OEM procurement departments. Manufacturers purchase

dependable supply chains, not geological reports. Mines are important, but only because they provide feedstock. The real economic value is created when that feedstock is converted into qualified products that the industry can purchase with confidence.

The delivery of a 99.9% pure dysprosium oxide qualification sample is therefore more significant than it might first appear. It is evidence that Ucore is beginning to move from being a technology developer to becoming an industrial supplier. There remains a long journey from qualification samples to sustained commercial production, but every successful processor has had to make that transition. Investors should pay far more attention to qualification milestones than to promotional claims of future vertical integration.

Whether Ucore ultimately succeeds remains to be seen. But I believe it is asking the right question. Instead of asking, “How do we own the entire supply chain?” it is asking, “Where is the greatest industrial bottleneck, and can we solve it better than anyone else?” History suggests that companies solving genuine industrial problems create far more lasting value than companies assembling promotional narratives.

That is why I continue to believe that the winners in the Western rare earth industry will not necessarily be those with the biggest deposits or the loudest promotional campaigns. They will be the companies that become indispensable to OEM purchasing organizations because they consistently deliver what manufacturers actually need. Ucore has begun to provide evidence that it understands that difference. Investors should watch its execution—not its rhetoric.

