Jack-in-the-Stox: Magnesium: Can America Learn to Make It Again?

written by Jack Lifton | August 5, 2026

*In this ongoing **"Jack-in-the-Stox"** Q&A series, Jack Lifton examines the companies, technologies, and geopolitical realities shaping the global critical minerals economy. Each week, Lifton offers direct commentary and analysis on the questions, claims, and strategic developments driving today's rapidly evolving critical minerals sector. Please note that Jack Lifton is not a licensed investment advisor. The views expressed in this column are his own and are provided for informational purposes only. Nothing in this column should be construed as investment advice or as a recommendation to buy or sell any security.*

Every few years, magnesium becomes the next "critical mineral."

Washington declares it essential. Investors discover that China dominates global production. A new generation of companies announces plans to restore American magnesium production, and the inevitable headlines proclaim that the United States is on the verge of reclaiming another strategic industry.

Perhaps. But before we become too enthusiastic, we should ask a more fundamental question. **What exactly are we trying to restore?**

If the objective is merely to produce magnesium metal somewhere within North America, then several companies have credible plans. If the objective is to rebuild a competitive magnesium industry capable of serving North American manufacturers without

permanent government support, the challenge is much greater. That distinction leads me to what I believe is a fundamental principle of industrial economics. Of course, I will call it:

Lifton's First Law of Industrial Recovery

A nation does not rebuild an industry by reopening a mine. It rebuilds an industry by restoring the capability to manufacture products that customers prefer to buy.

The United States is not short of magnesium-bearing resources. North America has abundant deposits of the magnesium bearing minerals, dolomite and magnesite, and magnesium-rich brines. What has disappeared is the industrial capability to convert those resources into competitively priced magnesium metal. As I have often written, investors should always **follow where value is added**. The greatest value is rarely created at the mine. It is created when raw materials are transformed into qualified industrial products. Today's magnesium sector illustrates that principle perfectly.

Three companies represent three very different—but potentially complementary—approaches.

Magrathea Metals: Reinventing Production

Magrathea Metals Inc. is attempting to solve magnesium's biggest historical problem: production economics. Its electrolytic process, using domestic brines and seawater, seeks to replace older technologies with a more efficient and environmentally acceptable method of producing primary magnesium. If successful, it could become an entirely new manufacturing platform rather

than simply a replacement for yesterday's industry. That is an ambitious goal, but it addresses the real bottleneck: metallurgy.

Magpro: Preserving Industrial Capability

Magpro LLC represents something equally valuable. Industrial experience. One lesson repeated throughout the critical minerals industry is that operating knowledge cannot simply be purchased. Experienced metallurgists, production engineers, and plant operators are strategic assets. Magpro's value lies not only in what it produces today, but in what it already knows. When industries disappear, knowledge disappears with them. Recovering that knowledge may ultimately prove more difficult than financing a new plant.

West High Yield (W.H.Y.) Resources: Supplying the Feedstock

West High Yield Resources Ltd. (TSXV: WHY) occupies a different position in the supply chain. Its Record Ridge project in British Columbia is one of North America's largest known high grade magnesium deposits. The company is focused on producing high purity magnesium feedstock to support future metal production across North America. That distinction matters.

No manufacturing industry survives without secure raw materials. Conversely, raw materials have limited strategic value unless someone can economically transform them into commercial products. Too often investors assume that discovering a large deposit automatically creates an industry. History says otherwise. Record Ridge may become an important foundation for a

North American magnesium supply chain—but only if competitive processing capacity is developed alongside it.

Remembering US Magnesium

No discussion of magnesium is complete without considering the rise and decline of US Magnesium LLC. For decades, it represented America's principal primary magnesium producer. Its eventual collapse reminds us that resources alone do not guarantee industrial success. Commercial competitiveness depends upon technology, operating efficiency, environmental performance, customer confidence, and continuous improvement.

Those are industrial capabilities—not geological ones.

Jack's Take

What strikes me about today's magnesium sector is that each company is trying to solve a different problem. Magrathea is developing a better way to make magnesium. Magpro is preserving the practical knowledge required to operate a magnesium business. West High Yield Resources is working to secure a long term North American source of high quality feedstock. None of those pieces alone rebuilds an industry. Together, however, they begin to resemble the components of one.

That is why I continue to believe that **Lifton's First Law of Industrial Recovery** deserves a place in every discussion of critical minerals:

A nation does not rebuild an industry by reopening a mine. It rebuilds an industry by restoring the capability to manufacture products that customers prefer to buy.

Magnesium will return to North America only when miners,

metallurgists, manufacturers, and customers once again form a single industrial ecosystem. The real opportunity is not simply producing magnesium. It is rebuilding the capability to compete.