

THINGS to Know About Me...

- 1. I'm married to my high school sweetheart
- 2. I've traveled to over 70 countries
- 3. I'm currently pregnant with our first baby



**Ashley Zumwalt-Forbes**Black Mountain Energy/Metals Acquisition Corp

## Critical Minerals, Energy and National Security

## Why are critical minerals important to the future of Energy and Energy Transition, and National Security?

The United States has identified 50 minerals critical to our economy. Of those 50, the United States imports >50% of 47 of them and, even more concerning, imports 100% of 17 of them. After seeing this fact, many say "oil and gas is all we need, and we have plenty of that". Think again. Oftentimes 'critical minerals' is misconstrued as ONLY 'electrification metals'; however, there are a host of other metals on the list (that the US is in extremely short supply of); these metals are required, even if you fully put energy transition to one side. We need to drastically increase mining activities simply to meet the demand, but certainly to increase national security, whether you believe in an energy transition world or not.

## What are electrification metals?

These are metals that are directly linked to electrification. For lithium-ion batteries, cathodes are most often nickel, manganese, and cobalt, anodes are graphite, and the electrolyte is lithium. The increase in demand of these metals is most closely linked to an energy transition scenario. Black Mountain Metals, a venture I co-founded in 2018 with Rhett Bennett, was focused on mining these metals, specifically nickel and cobalt in Australia.

A quasi-electrification metal / quasi-everything else metal is copper. I cannot underscore enough how much everything needs copper: all wiring is made of copper as it has the lowest price per measure of conductivity of any metal. A SPAC that I am an Advisor and Sponsor for, Metals Acquisition Corp, just announced a transaction on a copper mine in Australia called CSA, previously owned by Glencore.

## What are rare earth metals?

Here is where things really start getting interesting: the rare earth metals. 'Rare earth metals' is likely a term you have heard many times, but metal names that you aren't familiar with. The rare earth metals take up much of the bottom of the 50 critical minerals list and include metals like neodymium, terbium, samarium, and praseodymium (a mouthful). These metals are used to make permanent magnets which are in hard drives, MRIs, cars, defense satellite technologies, and, yes, wind turbines as well. China controls >90% of the rare earth space due in part to their major endowment of upstream rare earth resources; however, also because processing rare earths can be quite a nasty process and China is one of the only places that allows this to happen. Doesn't sound like a great situation all the way around, right?

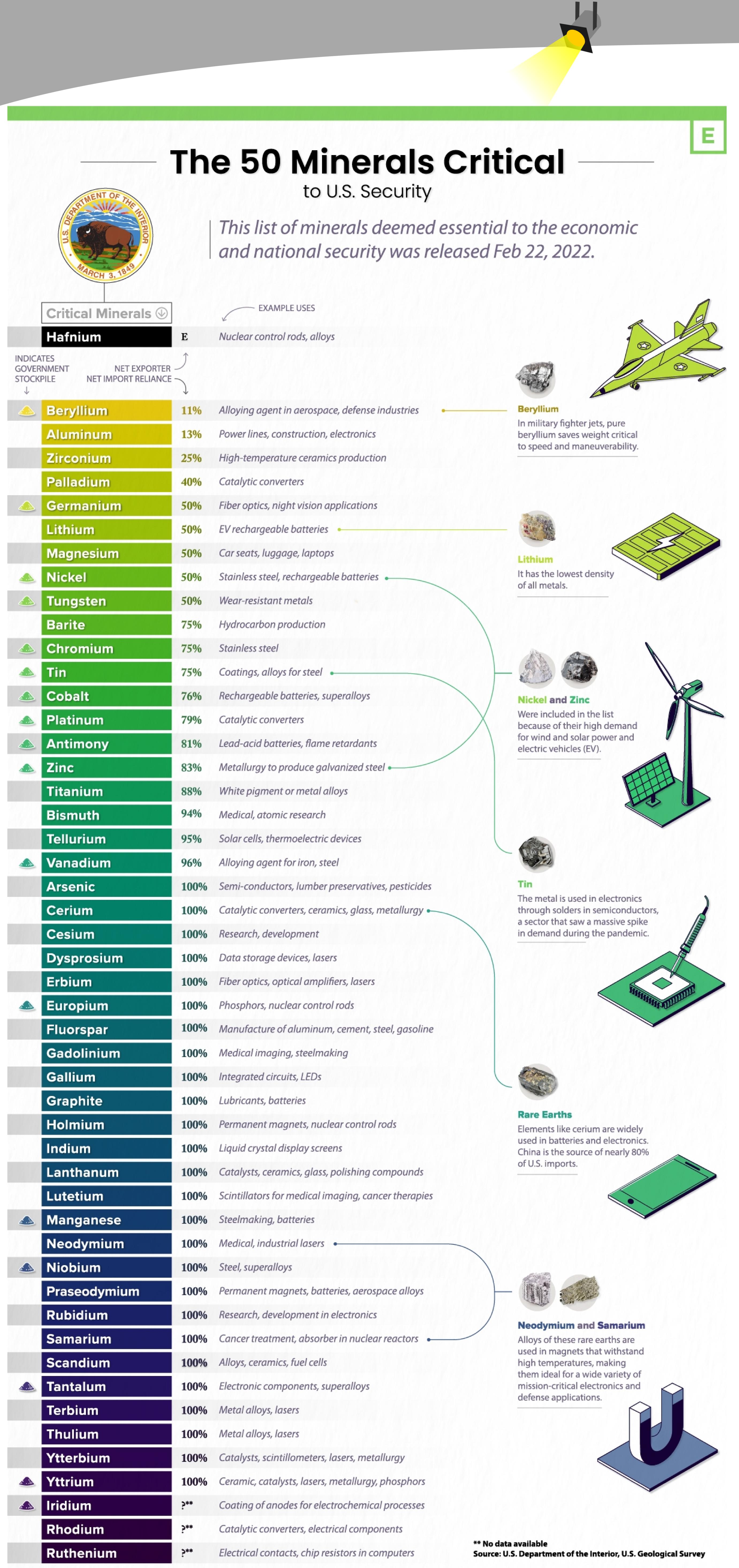
I was recently involved in a transaction, alongside Mick McMullen (Metals Acquisition Corp CEO), one of my long-time mentors, to acquire a company in Houston called REEcycle, which can recycle permanent magnets by pulling rare earths out of used materials and creating new oxide material, which can then be used to make new permanent magnets, all of this happening in a very environmentally friendly way. There is no current commercial technology in the space and we are very excited about this one. My capacity at that company is as an Executive Director. Recycling is truly the only way the west can establish a supply chain independent of China and is mission critical to national security.

For more information on Black Mountain Energy CLICK HERE

For more information on Metals Acquisition Corp

CLICK HERE

To connect with Ashley Zumwalt-Forbes CLICK HERE



Source: Visual Capitalist Elements

ELEMENTS 🙈

Connect with us:

ELEMENTS.VISUALCAPITALIST.COM

CLICK HERE or email clark@energysearchassociates.com

Have an Oil & Gas position to fill or want to learn about our openings?

Follow us on