

Craig Wiita  
Del Sol Refining, Inc.  
Amargosa Valley, NV

Hello, my name is Craig Wiita. I am the president and CEO of Del Sol Refining in Amargosa Valley, NV.

First, I would like to thank Congressman Gosar for hosting this very important event.

At Del Sol Refining we are a strategic and critical mineral refinery. We do research and development for the mining industry through a three-step process; lab scale, bench scale, and pilot scale - think of small, medium, and large for sizing. If recovery stays consistent through all three scales and remains economically viable, then the mine is ready to open.

Currently Del Sol Refining is conducting a pilot scale recovery circuit for Century Lithium.

Upon receiving the required permits, Century Lithium would be capable of producing close to 14,000 kilos of lithium carbonate (battery grade) per day upon the completion of their Clayton Valley, NV. lithium mine and recovery circuit. 14,000 kilos per day would end the U.S. dependence on lithium from other countries.

This is a great start towards US lithium independence, but what about the other strategic and critical minerals?

Our goal needs to be ending the United States' dependency on strategic and critical minerals completely.

The United States is dependent on imports for vital strategic metals that are necessary for components for military weapon systems, cellphones, solar panels, lithium-ion batteries, and many high-technology products.

The reason for this dependency is not due to geologic impediments, but due to politics. Large portions of public lands in the western United States have not been sufficiently explored, and the permitting process in the United States takes 7-10 years compared to 2-3 years in Australia and Canada.

Of great strategic importance to the U.S. are Rare Earth Elements (REE).

Lanthanides are the actual group known as REEs.

The estimated value of rare earth compounds and metals imported in 2021 was \$160 million, a significant increase from \$109 million in 2020. These are consumption estimates only, with no allowance to accumulate a much-needed U.S. stockpile.

The only current option the U.S. has is to purchase these rare earth elements, mostly from China, as we have not yet developed our own existing sources.

What the U.S. government needs to do is invest in U.S. production and refining of these metals and elements.

Here is a quick example: FY 2021 and 2022 has these two REEs on a potential acquisitions list for stockpile.

- Neodymium 600 metric ton (m/t)
  - Cost \$345 million
- Praseodymium 70 m/t
  - Cost \$9.9 million

Combined cost - \$355 million

Both fore-mentioned REEs are needed for rare earth magnets which are used in everything from wind-generated power to cell phones.

It would take 25% of the purchase price of these elements, or just under \$90 million, which as previously stated, would have to be purchased from China. Or, we could allow for permitting to mine and open a processing facility here in the U.S.

This would create supply chain independence, jobs, strengthens our national security, and keeps \$355 million from going to China.

The loan to fund the mine and recovery facility would be quickly repaid in production and create a U.S. source.

A couple of other strategic and critical minerals I would like to address are tellurium and antimony.

Tellurium is needed for the newest generation of solar panels, cadmium-telluride thin film solar panels. Tellurium makes up only .0001% of the earth's crust.

Tellurium occurs in porphyry copper deposits in the western U.S. and Alaska. Tellurium is primarily produced from anode slimes associated with these copper occurrences. Rio Tinto at their Kennecott Mine in Utah has installed an addition to their processing circuit that can now produce 20 tons of tellurium per year.

Antimony is used as a hardener in lead for storage batteries, other alloys, and in flame retardant formulations.

The U.S. has plenty of antimony present in stibnite formations in Idaho. The problem is there is nowhere to refine it. An old mill sits dormant in Butte, Mt. that could do it, but without feed from mines that are waiting on permits why would anyone bring it back to life?

America is way behind the curve on stockpiling strategic and critical minerals. China, with their "Belt and Road Initiative" is making deals all over the continent of Africa, to the extent of assimilating many African nations.

Craig Wiita  
Del Sol Refining, Inc.  
Amargosa Valley, NV

A break in the mineral supply chain would cripple day to day life as we know it, it will affect our military's ability to do their job, but there is nothing to worry about if America is America's supply chain.

Again, I would like to thank Congressman Gosar and others in attendance for giving me the opportunity to speak here today. Thank you.