



CARBON ORE, RARE EARTH, & CRITICAL MINERALS

Vision: Bring Alaska's CORE-CM potential into perspective

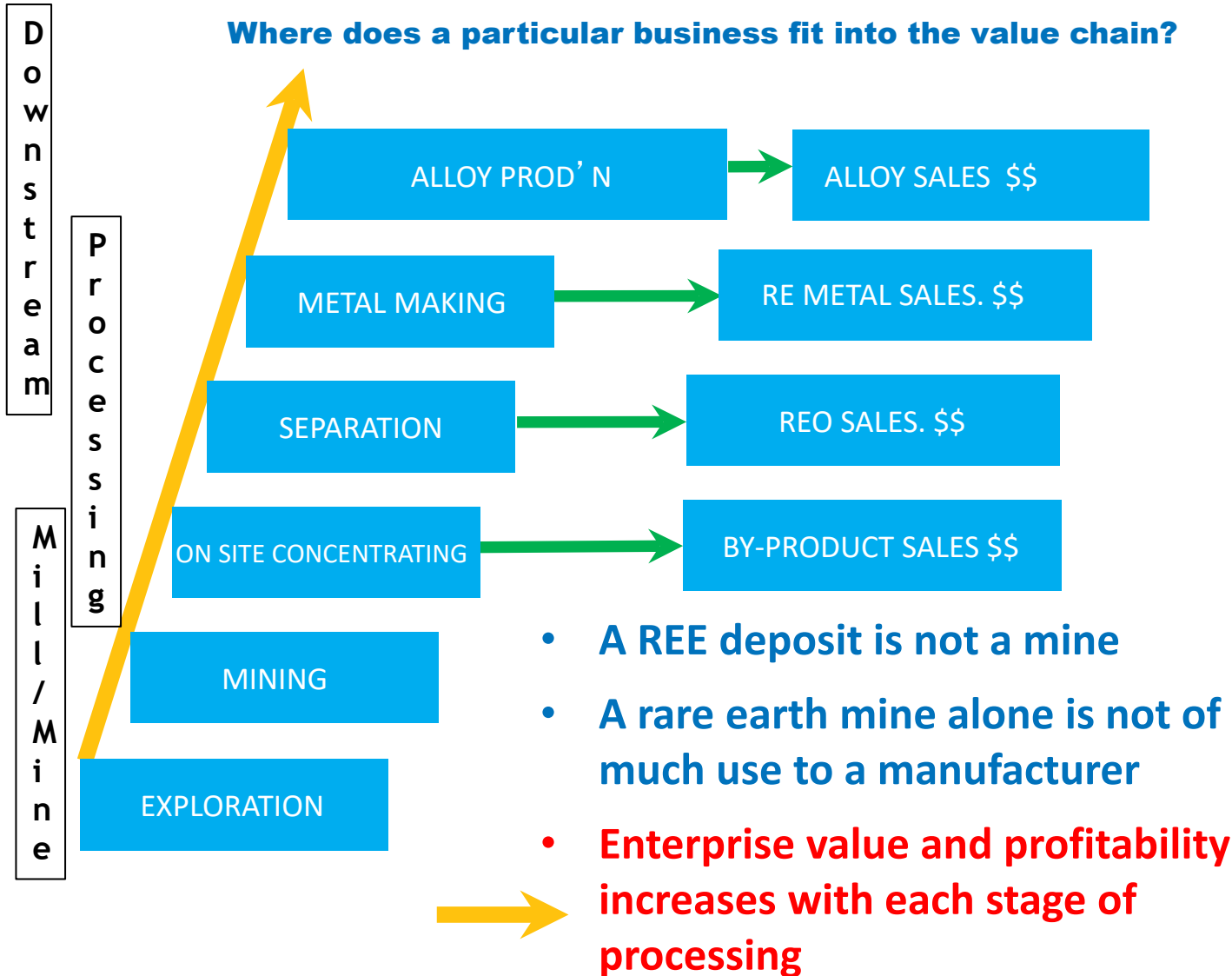
Mission: Establish a CORE-CM industry in Alaska by working with industry and other stakeholders to ID opportunities & address challenges



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REE VALUE CHAIN

Where does a particular business fit into the value chain?



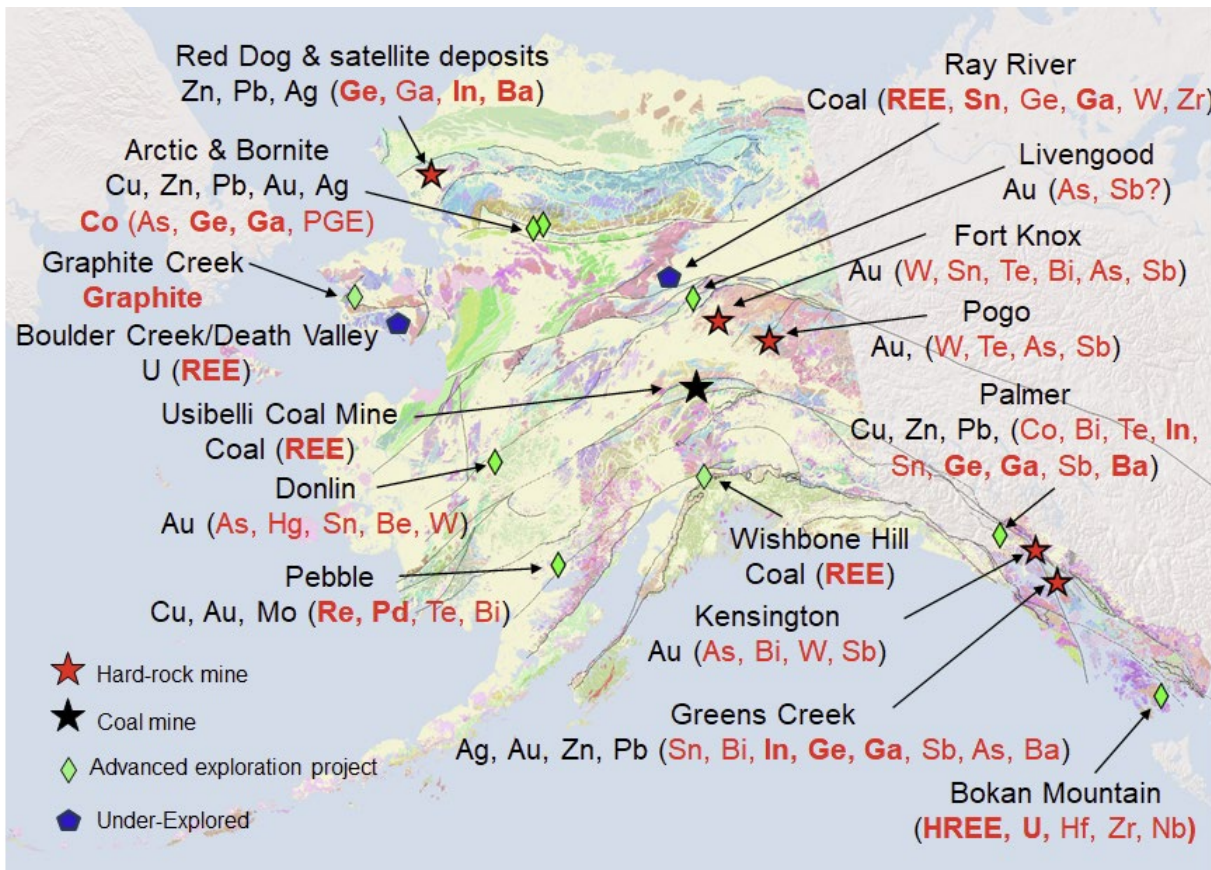
Graphic Courtesy of Great Western Minerals Group, Ltd, Jack Lifton
Technology Metals Research, LLC (after ESP Research)



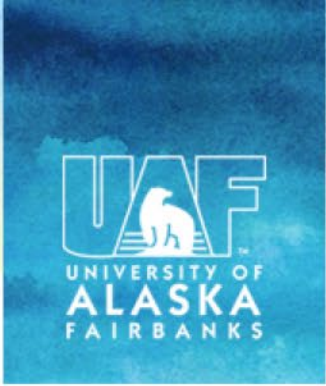
LESSONS LEARNED

- Pick the right team
- Partner with the private sector
 - Find out what they need, then figure out how to help them get it
 - Leverage resources through effective partnerships
- New discoveries are at the earliest in AK
- Cheap Energy is a priority and will enable in-state processing and economic diversification
- B/C everything is remote, focus on benefaction, energy, and infrastructure
- Pay attention to changing demand market

MINERAL RESOURCES



- AK's current mines and advanced mineral exploration projects
- Potential CM in red
- CM in bold font is the most abundant CM, with current data, at the respective property



THANK YOU

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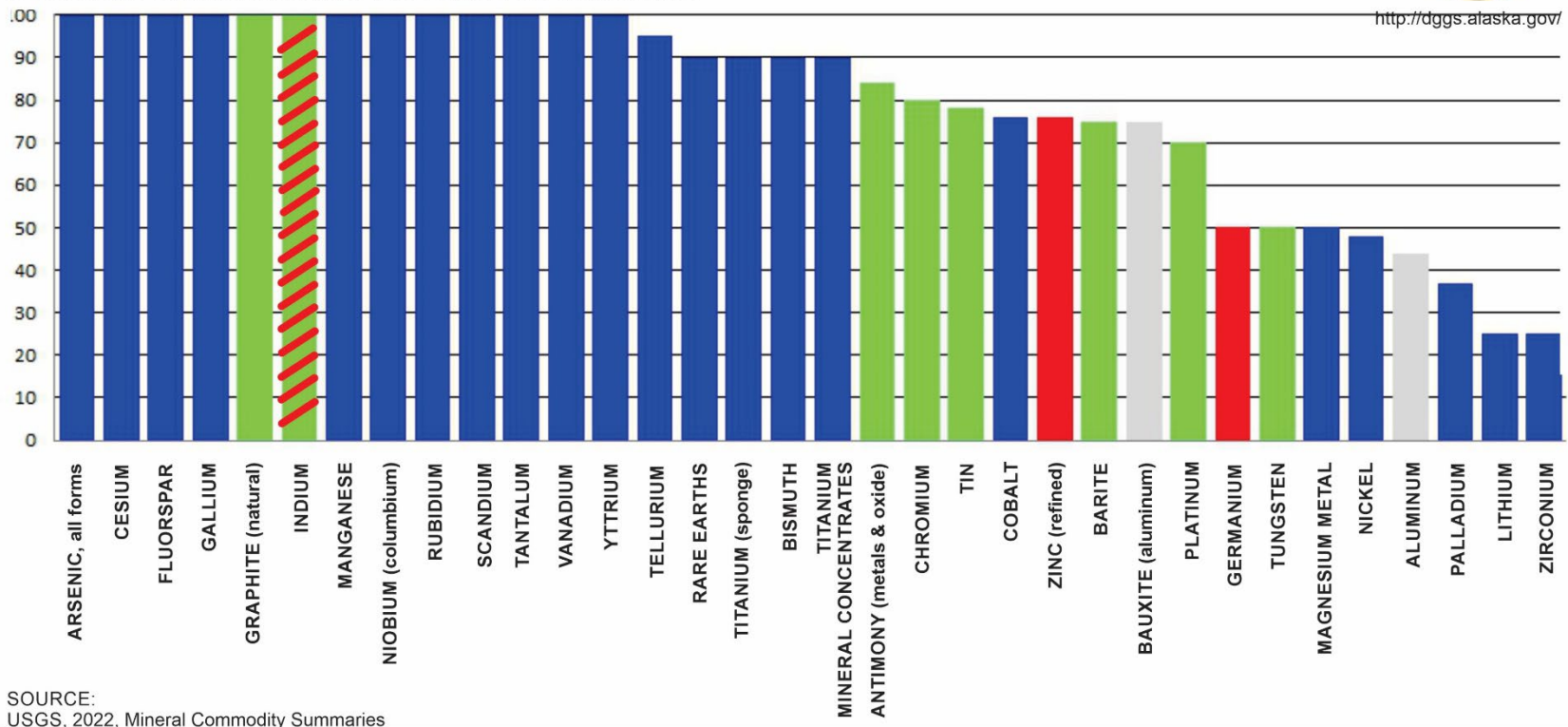
BACKGROUND—ALASKA'S CRITICAL MINERAL POTENTIAL



2021 U.S. Critical Minerals Import Reliance

NOTE:
Does not include beryllium and hafnium as these commodity data are not available.

<http://dgs.alaska.gov/>



SOURCE:
USGS, 2022, Mineral Commodity Summaries

ALASKA





ADDITIONAL ASSETS

- (Re-establishing) the Mineral Industrial Research Lab at UAF with emphasis on mineral characterization and dry separation capability:
 - HH-XRF
 - ICP-MS
 - Dry Separations Equipment
- Further investing in upgrading and utilizing additional equipment found at UAF, including electron microscopy, microprobe analysis, LIBS, EDS & WDS, etc.
- UAA is developing bioreactors to separate elements from ores without the use of acids
- UAS and UAF are expanding their respective efforts to provide mine training