



Critical Minerals and Rare Earth Elements at the University of Alaska

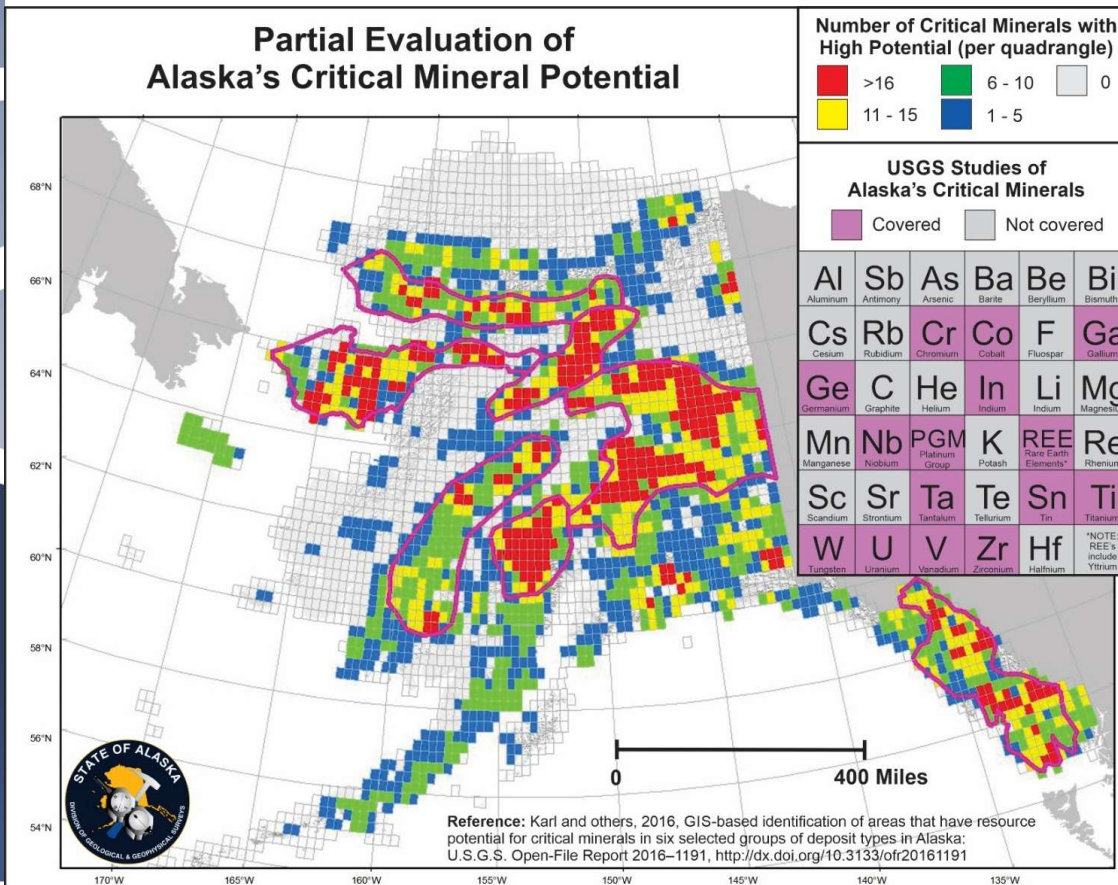
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The Critical Mineral Issue



Critical Minerals

- A non-fuel mineral essential to the economic and national security of the US
- Vulnerable supply chain
- Serves an essential function in manufacturing of a product, the absence of which would have a significant impact

The US is fully or partially dependent on foreign sources for a majority of critical minerals.

Alaska has critical mineral resources

The Role of The University of Alaska in Supporting The State's Critical Mineral Initiative



Research
Workforce
Development



Formation of the Critical Minerals Group that will include the three MAUs

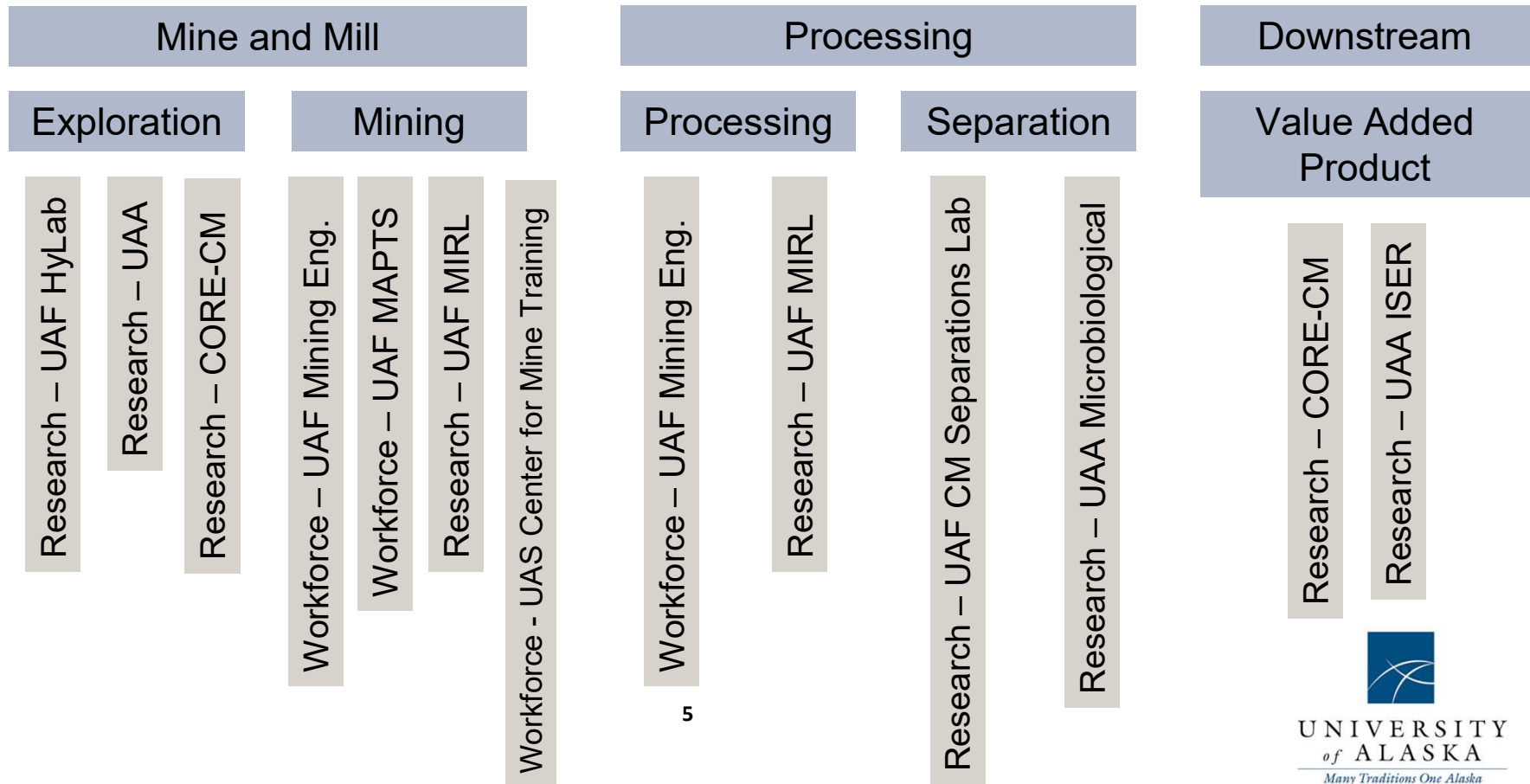


CORE-CM

- Carbon-Ore, Rare Earth and Critical Minerals
- Funding through DOE-NETL
- Focused on catalyzing regional economic growth and job creation by realizing the full potential of natural resources
- Phase 1 funded at UAF with collaboration at UAA
- Mission of funded project – Establish a CORE-CM industry in Alaska by workin with industry and other stakeholders to ID opportunities
- Pls – Brent Sheets (UAF/INE) and Steve Masterman (DGGS)

Where UA Contributes to CM Effort

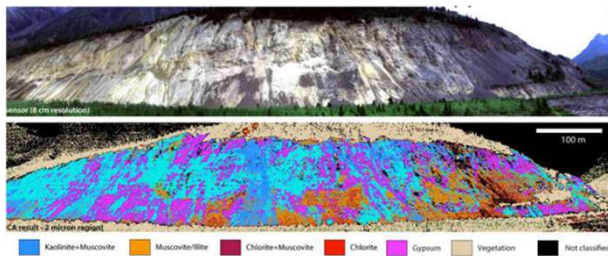
Critical Minerals Group



Planned CM Effort at UAF

Research – UAF HyLab

Use of the remote sensing method hyperspectral imaging to extract CM compositional information as an aid in exploration



Research – UAF CM Separations Lab

- Hire subject matter experts
- Rejuvenate laboratory space
- Purchase needed instrumentation
- Fund seed projects
- Workforce development



Workforce Development

Planned Efforts at UAA

1. Continue work with industry to discover new critical mineral deposits in Alaska and globally based on geochemical and geological expertise
2. Expand analytical capacity to be a center for analysis for REEs and other critical elements
3. Refine existing and develop new methods of REE extraction using biotechnology



Planned Efforts at UAS

Advancements in the
Center for Mining
Training



Closing Remarks

Alaska has a great opportunity to build its economy and contribute to the US's efforts on critical minerals. With the funding provided along with our current CM research and workforce development, the University will play a vital role in this effort



Questions?