

Critical Minerals – *Important Myths*

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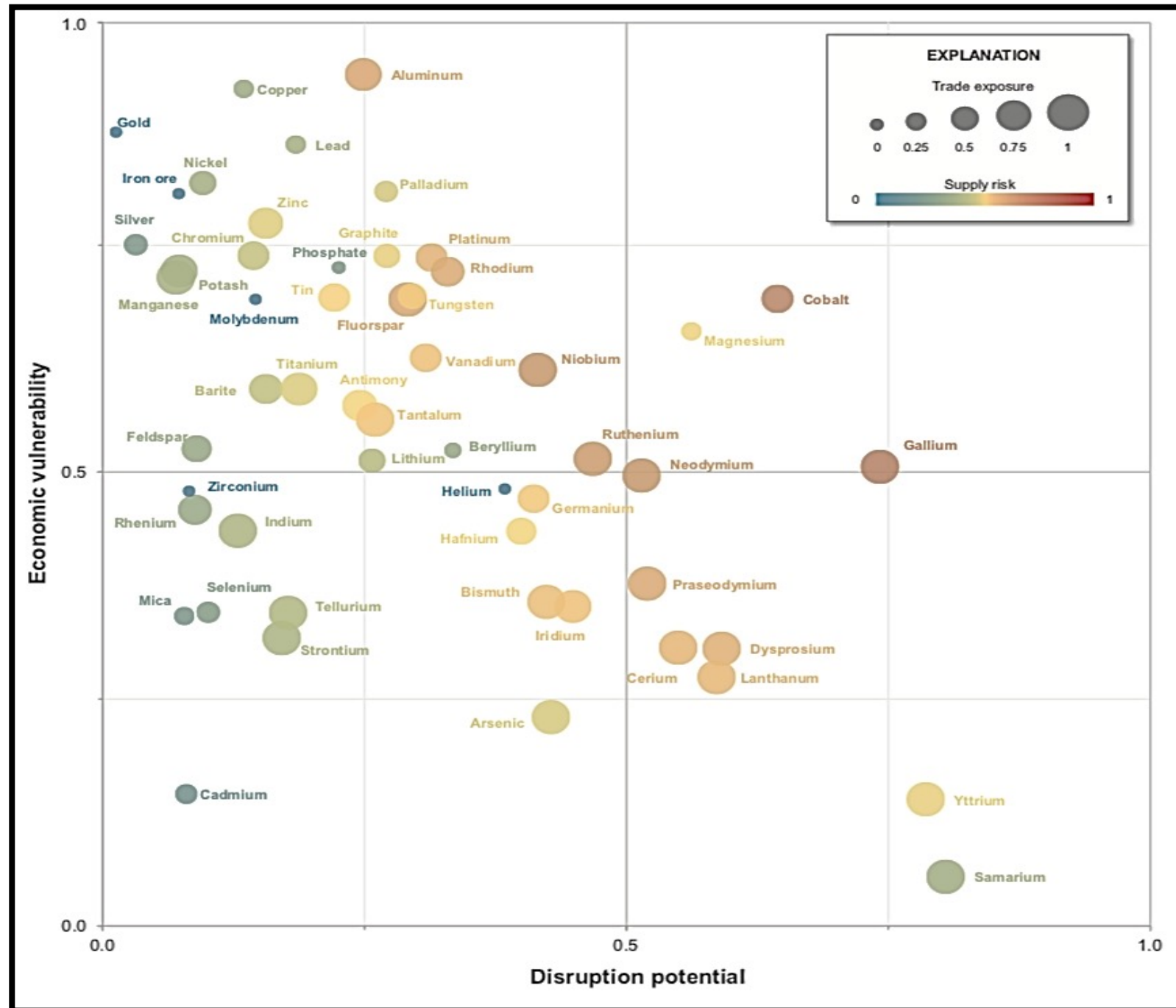


Organization

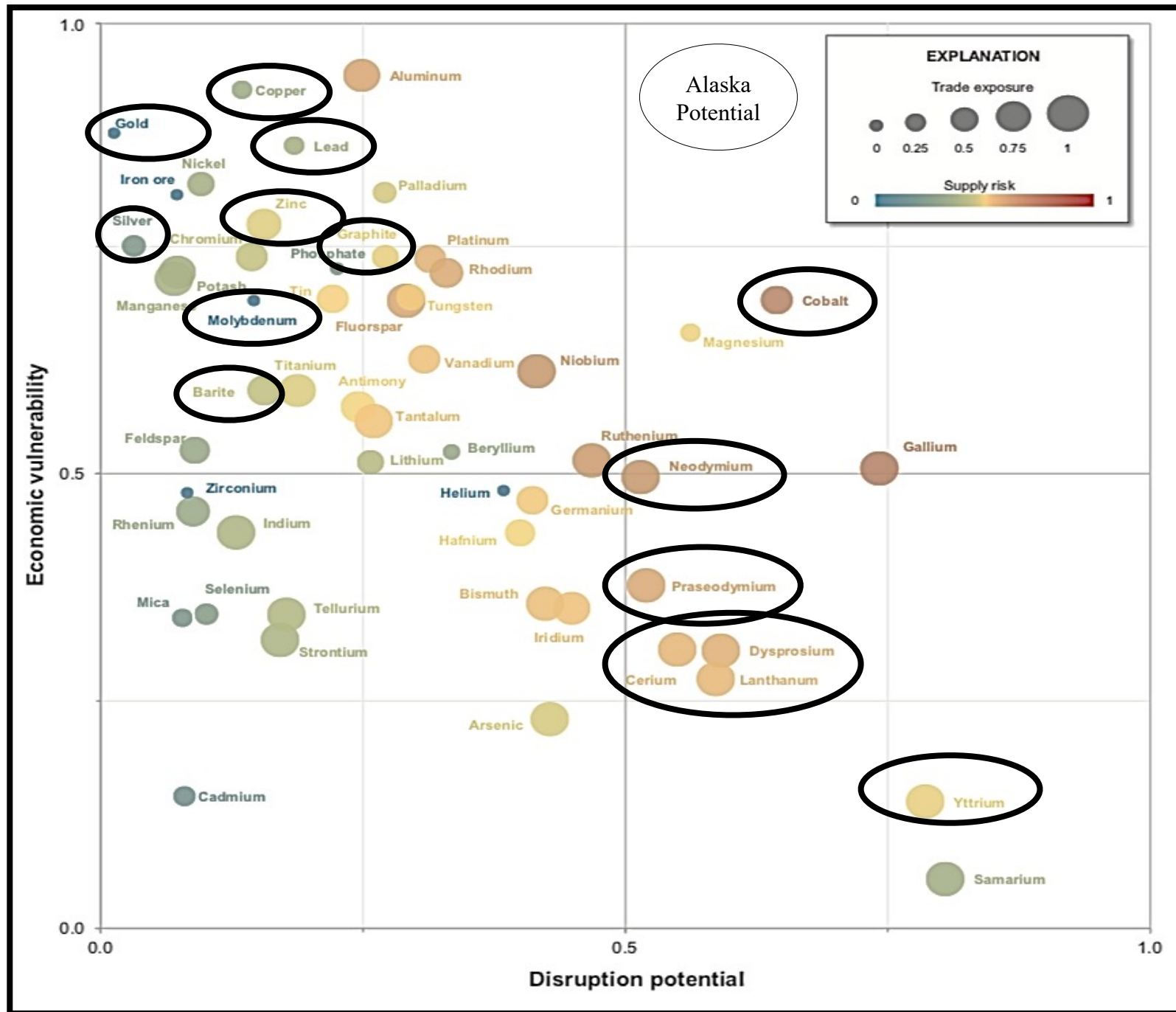
- Introduction
- A prediction: Alaska's Critical Mineral Production in 20 years
- Three myths to think about



USGS: Economic Importance and Disruption Potential

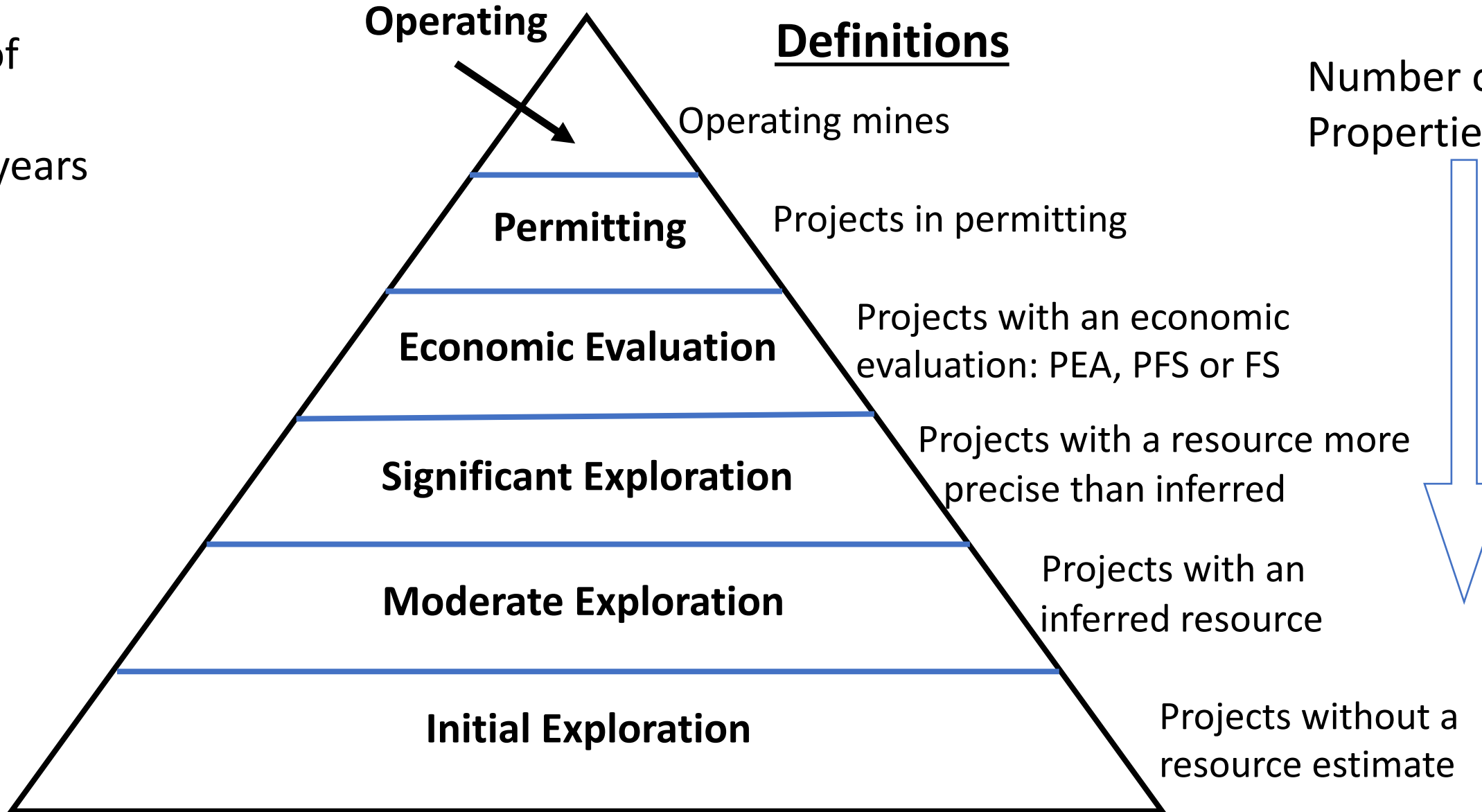
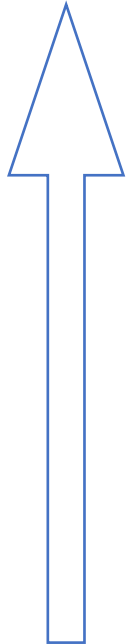


USGS: Economic Importance and Disruption Potential

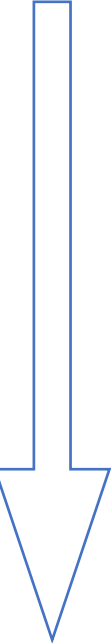


Method

Likelihood of
Becoming a
Mine in 20 years



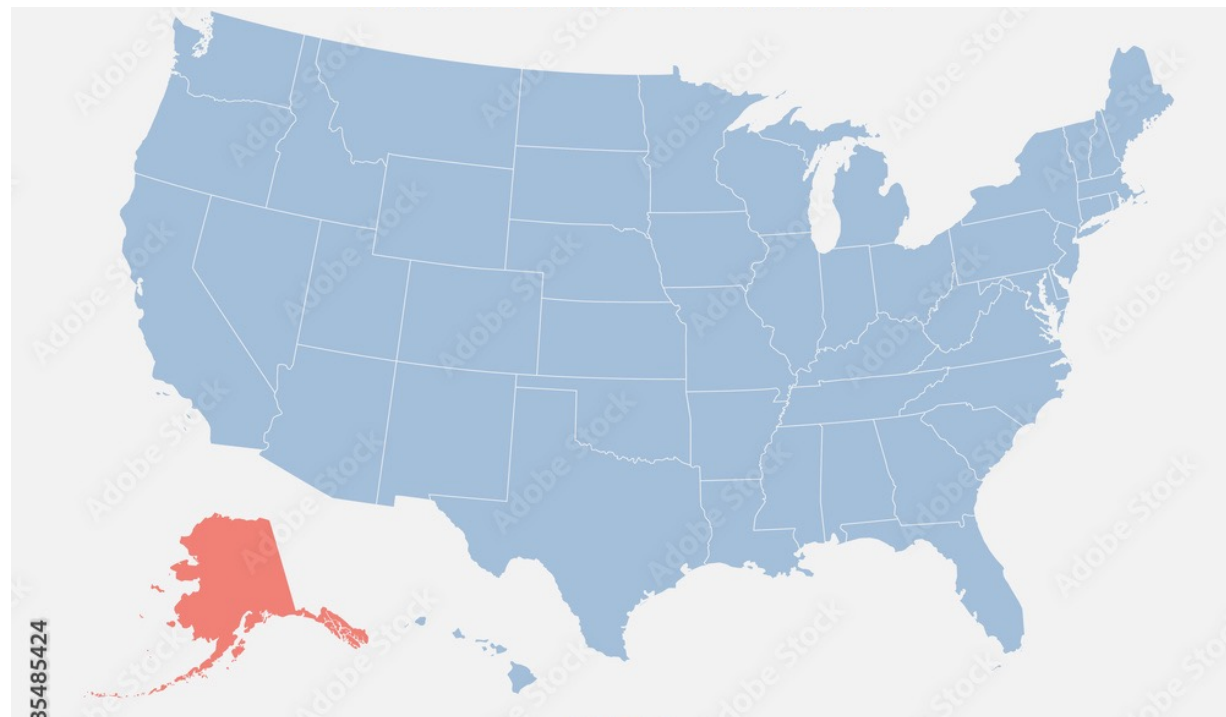
Number of
Properties



Results: Energy & Critical Minerals

	<i>Today</i>		<i>'Favorable' Scenario</i>		
	<i>Production</i>	<i>% of 2019 US</i>	<i>Production</i>	<i>% 2019 US</i>	<i>% 2019 World</i>
Cu			114 ktons	9%	1%
Pb	121 ktons	44%	215 ktons	79%	5%
Zn	603 ktons	80%	710 ktons	94%	6%
Au	17 tons	9%	80 tons	40%	2%
Ag	501 tons	51%	1,008 tons	103%	4%
Mo			138 tons	0%	0%
Co			518 tons	104%	0%
Barite			237 ktons	57%	3%
TREO			2,227 tons	8%	1%
Graphite			249 ktons	100%	23%

Myth #1: Alaska is a big state



Myth #2: It's about time.

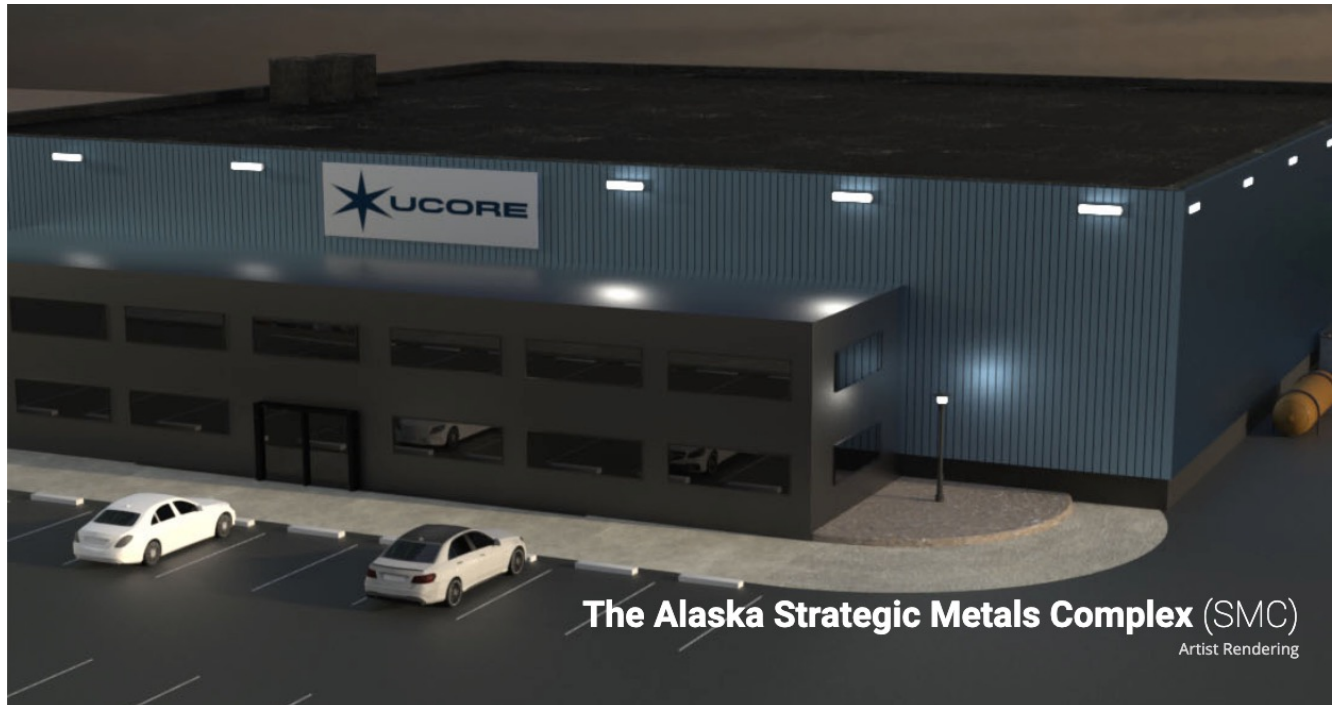
Alaska can(not) develop mines quickly

- In Alaska it takes ~20 years from discovery to production
- Other developed jurisdictions, about half as long
- Alaska's record was Pogo: 15 years
 - That was before the advent of exceptionally long EIS, and guaranteed litigation



Myth #3: Rare earth elements are (not) rare

- Rare earth elements aren't rare
- Lack of a functioning market has hampered development of mines and private investment in separation technology research



Picture of proposed facility taken from the UCORE website.

Summary

- Bullish on Alaska
- Problems to address:
 - Federal Permitting
 - Infrastructure
 - Technological issues concerning REE
- Questions?

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