



BOEM BUREAU OF OCEAN
ENERGY MANAGEMENT

Critical Minerals in the Alaska OCS

May 9, 2024

Daniel Lasco, Geologist, Alaska Region
DOE Alaska Workshop on Critical Minerals



- BOEM is open for business
- Pivot to renewables
- Develop carbon storage
- Marine minerals





30 CFR Part 580 - Prospecting for Minerals

- **OCSLA requires all parties who are prospecting marine minerals for commercial purposes to receive authorization.**
- **Under BOEM regulations, pre-lease geological and geophysical explorations can only be performed under a permit, authorization, or scientific research notice.**
- **Interested parties are required (under 30 CFR 580.12) to submit permit application form (Form [BOEM-0134](#)) at least 30 days before the start date.**
 - Application provides the information necessary to evaluate potential lessee's qualifications, and upon approval, a permit or authorization is issued.
 - Environmental assessment may be required as part of permitting process.





30 CFR Part 581 – Leasing of Minerals

Leasing is a separate competitive process from the prospecting permit

- **The lease sale process can be initiated by:**
 - *An unsolicited request for a lease sale (30 CFR 581.11)*
 - On DOI's own initiative (30 CFR 581.12)
 - Followed by:
 - A request for OCS mineral information and interest (30 CFR 581.12) "RFI"
 - Joint State/Federal coordination (30 CFR 581.13).
- **Lease term - not less than 20 years (other than sand and gravel).**
- **BOEM has yet to issue a competitive lease under these regulations.**





Critical Minerals

- Definition: Non-fuel mineral or mineral material essential to the economic and national security of the U.S.
- BOEM is responsible for the management of these resources in the OCS

Manganese Nodules

- Golf Ball to Softball Size
- Occur on Abyssal Plain
- Cobalt, REE, Manganese, Platinum, Bismuth



Source: USGS

Ferromanganese Crust

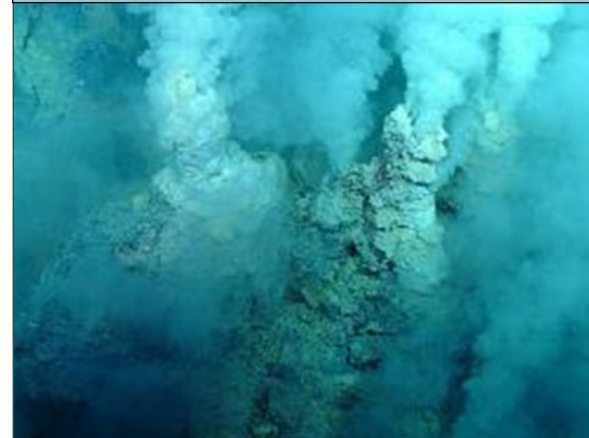
- Millimeter to Centimeter thick precipitate
- Cover Deep Seamounts
- Cobalt, REE, Manganese, Platinum, Bismuth



Source: USGS

Seafloor Massive Sulfides

- Aleutian Arc
- Hydrothermal Vents
- Antimony, Bismuth, Gallium, Tellurium,
- Sensitive Ecosystems



Placer Deposits

- Heavy Sands
- Nearshore shallow sands and gravels
- Gold, Tin, REE



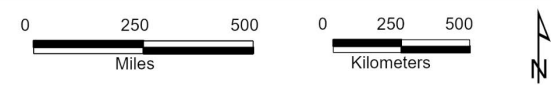


Critical Minerals In the Alaska OCS



BOEM BUREAU OF OCEAN ENERGY MANAGEMENT

- Iron and Manganese Crust Areas
- ★ Ferro-Manganese Oxide - USGS
- ★ Ferro-Manganese Crust - IMLGS
- Marine Mineral Geochemical - USGS
- Prospective Regions**
- Aleutian Arc
- Canada Basin
- Chukchi Borderland
- Gulf of Alaska Seamounts
- Submerged Land Act
- Offshore Continental Shelf Areas
- Bathymetry**
- 0-200 meters
- 201-500 meters
- 501-2500 meters
- >2500 meters



Developed By: BOEM Alaska Region
 Date: 5/2/2024
 Projection: Albers; Scale: 1:22,000,000
 Datum: North American 1983
 Map ID: AKR2024026

****Data points from BOEM funded USGS study and USGS pp1870****



BOEM.gov



Daniel Lasco | daniel.lasco@boem.gov | 907-334-5332