RESPONSES TO QUESTIONS FOR THE RECORD
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HEARING OF THE HOUSE NATURAL RESOURCES COMMITTEE
SUBCOMMITTEE ON ENERGY AND MINERAL RESOURCES
DEEP DIVE: EXAMINING THE REGULATORY AND STATUTORY BARRIERS TO DEEP SEA MINING
Hearing Held January 22, 2026

Questions from Representative Russ Fulcher

1. How would the use of programs like FAST-41 be useful for permitting deep-sea mining?

FAST-41 should be used to streamline federal permitting for any approvals related to ocean mineral exploration, development, and processing. The U.S. is in a global competition for critical minerals and rare earth elements. Every tool at the government's disposal should be used to ensure the U.S. leads in developing critical minerals and rare earth elements from offshore regions. Otherwise, we could increase our dependency upon China. Ocean mineral projects can be delayed by reviews and input from multiple agencies, including the Bureau of Ocean Energy Management, the Bureau of Safety and Environmental Enforcement, the National Oceanic and Atmospheric Administration, the Environmental Protection Agency, and others. FAST-41 streamlines the process by assigning one lead agency and requiring the others to coordinate. FAST 41 also sets binding schedules for reviews and uses a permitting dashboard to enhance transparency. FAST-41 encourages joint environmental and other documents, prevents duplication, and locks in the scope of review. FAST-41 review can send a positive signal to capital markets for the purposes of encouraging investment. In general, the government should soften the threshold project value to qualify for the FAST-41 process. Ultimately, the FAST-41 process should serve as the baseline for approving any project through federal permitting. The more projects that can secure a streamlined process, the more likely companies across all sectors will be able to step up, secure funding, and move forward with projects that benefit the U.S. economy. For ocean minerals, FAST-41 will help companies raise and utilize funding to provide the geological, engineering, and environmental data and analysis necessary for evaluating project viability – data that will ultimately benefit the government in its own capacity as regulator.

2. What do you view as some of the biggest barriers to mapping the sea floor at high resolution?

Prior to the issuance of Executive Order 14285, "Unleashing America's Offshore Critical Minerals and Resources," there was a relative lack of urgency within the federal family in planning and mapping the seafloor for critical minerals and rare earth elements. The Executive Order effectively changed that, requiring that the Secretary of Commerce, "in consultation with the Secretary of State, the Secretary of the Interior, and the heads of other relevant agencies, and in cooperation with commercial and other non-governmental organizations, develop a plan to map priority areas of the seabed, such as those with abundant or accessible undersea resources, in order to accelerate data collection and characterization, prioritizing areas within the United States Outer Continental Shelf." The development and implementation of the mapping plan should be a high priority for the government. The plan should include fast-tracking

environmental and other permits to authorize mapping and promoting public-private partnerships. Ease of permitting – and expedited permitting – will help open the pathway to high-resolution mapping.

To create the best opportunity for private engagement and investment, the government must provide for the security of tenure. In deep-sea mining, security of tenure means the legal certainty that a company has an exclusive, enforceable right to a specific seabed area for a defined period, with a predictable path from exploration to mineral production—as long as it follows the rules.

It is critical for the Bureau of Ocean Energy Management (BOEM) to augment its current licensing process to provide security of tenure for lease sales. Companies seeking ocean mineral licenses are seeking to gain a foothold in a nascent industry. Security of tenure will drive investability, thereby incentivizing qualified operators to advance the government's stated priorities, including reducing China's dominance of critical minerals.

Furthermore, ocean mineral exploration and production can require hundreds of millions of dollars in expenditures before the opportunity to capture any revenue is realized. Investors and project developers will generally not commit such capital unless the company has security of tenure, thereby ensuring the opportunity to follow through with mineral production. Security of tenure ensures the party that takes early risk can capture the upside later. If tenure can be revoked or arbitrarily changed, the project can become uninvestable.

Finally, mapping the seafloor at high resolution will require increased funding for BOEM and the National Oceanic and Atmospheric Administration (NOAA). BOEM and NOAA have historically had insufficient funding for federal mapping activities. BOEM and NOAA should seek greater congressional funding to enable rapid, efficient mapping of unknown seafloor areas to advance geological knowledge and expand the current inventory of available minerals. Their budgets should be coordinated to ensure efficiencies in federal mapping efforts.

Question from Representative Jared Huffman

Mr. Milito, how many U.S.-flagged vessels capable of deep sea mining commercial activities are you aware of? Are there any capable of operating in Arctic waters? Could the U.S. acquire or build additional vessels capable of deep sea mining? On what timeframes?

This series of questions brings together several distinct issues, so I'd like to address each one separately to avoid confusion.

Question 1: How many U.S.-flagged vessels capable of commercial deep sea mining are you aware of?

With the ocean marine exploration industry now entering the commercialization phase, we face a massive opportunity for shipbuilding and the deployment of U.S.-flagged vessels. Offshore maritime projects necessarily require significant vessel support. Ocean mineral exploration will pave the way for vessel activity related not just to the actual production of the critical minerals

and rare earth elements, but also in the form of vessels in support of operations, such as crew transfer vessels and offshore service vessels. As such, many vessels in the U.S.-flagged fleet currently have the potential to participate in ocean mineral exploration activities in the support function in the near term. Furthermore, there are various types of technologies that have been developed for ocean mineral exploration and production. For certain technologies and activities, U.S. flagged vessels could be utilized or retrofitted. To that end, through its leadership in research, development, and demonstration of technologies, the U.S. is uniquely positioned emerge as a global hub for manufacturing and development of equipment, systems, and vessels. It is important to highlight that the deep sea mining industry not only supports manned surface vessels but also leads in the innovation, development, and deployment of subsea vessels and technologies. By developing and deploying these innovative technologies, the ocean mineral exploration sector has been a leader in ocean research for the past several decades. While we cannot pin down a specific number today, we can be assured that the fleet of U.S. vessels used in ocean mineral projects will grow as the industry grows.

Question 2: Could the U.S. acquire or build additional vessels capable of deep sea mining, and on what timeframes?

Yes, the U.S. could acquire or build additional vessels capable of deep sea mining. With the ocean marine exploration industry now entering the phase of commercialization, the United States has a significant opportunity to catalyze shipbuilding and deploy U.S.-flagged vessels, supporting domestic shipyards, high-skilled maritime and engineering jobs, port economies, and long-term workforce development, which are all aligned with national economic and security priorities.

Offshore maritime projects require significant vessel support. Ocean mineral exploration will pave the way for vessel activity related not just to the actual production of the critical minerals and rare earth elements, but also in the form of vessels in support of operations, such as crew transfer vessels, offshore service vessels, and oceanographic research vessels. The timeframe for acquisition or construction depends on the type of technology deployed for the activity.

Purpose-built commercial mining vessels would likely follow once projects are approved and demand signals are clear. Conversion or modification of existing offshore vessels could take about two to five years, depending on system complexity and shipyard availability. Designing and constructing new, purpose-built vessels would likely require a longer timeframe from concept through delivery.

In addition, U.S. companies have led the global market in developing and deploying drillships in the oil and gas sector. Companies in deep-sea mining have been able to efficiently leverage drillship technologies for use in producing critical minerals. Reflagging vessels is also an option for deep-sea mining.

At scale, deep-sea mining support will likely create thousands of U.S. industrial jobs, building on America's strengths in offshore energy, advancing complex marine and subsea systems, integrating offshore project components, and providing lifecycle support. It is widely understood that the U.S. research fleet is also lagging behind those of major world economic powers,

including China and Russia. Increased government funding and industry investment in producing and providing capable research, exploration, and mining vessels will help bridge this gap. However, positive policy support will be needed to achieve this outcome.

The urgency is high. Other countries are already moving forward with ocean mineral strategies and development. If the U.S. delays, we risk permanently surrendering leadership in vessel technology, marine robotics, and subsea operations to foreign competitors. Moving now allows the U.S. to lead with strong standards, domestic shipbuilding, and American workers.

Question 3: Are there U.S.-flagged vessels capable of operating in Arctic waters?

Yes, but it is important to be precise about what "capable" means. The United States currently operates U.S.-flagged, ice-capable, and icebreaking research and offshore vessels that routinely perform seabed mapping, remotely operated vehicle (ROV) operations, coring, and environmental baseline studies in Arctic and ice-affected waters. These vessels support scientific research, offshore energy, and national security missions and could be utilized for exploration and environmental data collection related to ocean mineral exploration and deep sea mining. Additionally, ocean minerals are located in various Arctic settings. For example, many Arctic mineral resources occur in relatively shallow, ice-affected waters rather than in abyssal depths. As a result, different vessels would be required for the varying geology and conditions across the Arctic regions. Some vessels may require specialization, weatherization, and certification for Arctic operations. Finally, traditional open-water vessels can potentially operate during seasonal windows and, depending on specific weather conditions, when the area has been cleared by icebreakers.