

Date: June 22, 2025

To: Bureau of Ocean Energy Management

From: Deep Sea Vision, CEO Tony Romeo

**Re: Comment to Commercial Leasing for Outer Continental Shelf Minerals Offshore
American Samoa-Request for Information and Interest**

Deep Sea Vision (Here in referred to as DSV) is submitting this memo in response to the recent RFI seeking comment on deep sea mineral leasing in American EEZs. Deep Sea Vision was founded as a deep-sea exploration company capable of surveying oceans at 6000 meter in depth. DSV owns a research vessel with HUGIN 6000 AUV (Autonomous Underwater Vehicle) equipped with synthetic aperture sonar (SAS) among other high end exploration sensors and one of only a handful commercially available in the world. DSV is led by Anthony Romeo, CEO, and Air Force Academy graduate and President of Operations, Craig Wallace, who led the HUGIN program at Kongsberg for nearly 20 years developing new sonar methodologies specific to deep ocean minerals. Deep Sea Vision has conducted mineral exploration projects including work in the Cook Islands, American Samoa and the US Line Islands. Prior to establishing DSV, founding members have conducted mineral exploration for a host of other nations. DSV has also completed the largest-ever search for Amelia Earhart, trained US allied countries on deep sea sonar as well as completed oil and gas pipeline surveys in the Atlantic. DSV is uniquely positioned as an American company, led by an Air Force Veteran, with extensive experience in the Pacific Ocean. Over the last several years, DSV has developed relationships with several Pacific Island nations and jurisdictions to include Kiribati, Samoa, Tuvalu, New Zealand, and Papua New Guinea among others. DSV also recently met with the governor of American Samoa to discuss mineral work and partnership opportunities.

In 2024, DSV did a survey of the American Samoa EEZ on the southeastern border butting up against the Cook Islands. DSV discovered areas where there were polymetallic nodules and crucially were capable of acoustically mapping delineation boundaries by abundance. A map of these surveyed areas along with color pictures is submitted with this memo (CONFIDENTIAL). In 2023, DSV discovered polymetallic nodules around Baker and Howland Island in uneven disbursements in what is believed to be the first positive identification of nodules in the Line Islands EEZ. In May of 2024, DSV discovered that nodules could be reliably identified using Synthetic Aperture Sonar SAS and “Multi-Spectral” Backscatter, a huge development in the mineral exploration business. Craig Wallace delivered a seminal presentation at the Underwater Minerals Conference in the Cook Islands in 2024 and has been invited back to deliver another presentation at the 2025 conference on updated research. The result of this work is that minerals can be more quickly identified and assessed than previously thought. Unlike known areas such as the Clarion Clipperton Zone CCZ, where it is believed the nodules have homogeneous uniform

distribution, DSV explorations have revealed the opposite. Investigation into the American Samoa EEZ show that high abundance of minerals can fluctuate to low over very small regions requiring a far more efficient method of survey versus traditional. A short CONFIDENTIAL video is included on Slide 2 of the attached presentation showing the clear demarcation of nodules from the surrounding seabed and variability.

Based on this information, DSV would like to make the following 5 comments:

1. **DSV recommends that BOEM first complete both low resolution surface map coupled to high resolution but sparse sampling with AUV and reduced physical sampling. Using new technology DSV would look to conduct the mapping as part of a single campaign. In order for companies to honestly bid on tracts of seabed this process is critical in mapping American EEZs in the Pacific**

DSV recommends a survey of the American Samoa EEZ first since this area has been requested. American Samoa provides quick and good access to maritime resources as well as an American shipyard and equipment. Additionally, the nodules around American Samoa show compositions similar to the Cook Islands of which considerable studies have been conducted reducing the required physical sampling. DSV also recommends a survey of the EEZ of the Line Islands to include Jarvis, Howland and Baker Islands followed by the North Mariana Islands. Once this has been done, a complete picture of what resources the United States has available will be known. This valuation assessment and knowledge will serve as an important protection against foreign powers who may surreptitiously try to gain access and collect American minerals. DSV can conduct efficient resource estimations using sparse techniques with modern sonar developments focused on this market. This provides the knowledge to properly protect these resources and auction off the rights to them.

2. **Based on observations in the ISA's CCZ area and the Cook Islands, BOEM should seek multiple contractors all working towards a common goal of collecting minerals.**

There is more than ample seafloor area for many contractors. Some of the contractors may remain solvent and do work - others may not. Some contractors will introduce new and innovative mineral collection techniques. Some of contractors will make discoveries that will be shared with others to make the process more efficient. There are numerous examples of this in the CCZ and Cook Islands. The United States will win if more entrepreneurial companies are allowed to participate – which is what has made our country the leader in many industries.

3. **DSV recommends streamlining and fast-tracking the process of mineral exploration through a set percentage of leased seabed at the onset from a governmental lease.** Every “traditional” 20-day expedition to collect samples and conduct work is over two million dollars. Unlike land “mining” or other land-based activities, deep sea mineral collection requires a great deal of coordination and planning.

A clearly mapped process with strong government support at all stages must be defined crucially defining the collection. Going into exploration with no clear path will deter investment in the industry. In the CCZ for example, multiple contractors have had no clarity, work has been stalled and their progress questioned. During the most recent ISA meeting in July of 2025 the organization themselves published this:

Legal, financial and training aspect

12. The Commission noted that expenditure levels for a number of contractors had been far lower than estimated and reminded that explanations on the variance should be made by contractors who have not done so. On the other hand, some other contractors reported much higher expenditures indicating their strong commitments to their exploration work.

13. The Commission also noted that, while contractors generally have performed adequately, a number of them have limited their offshore exploration activities, including environmental studies and sampling. Instead, they focused on desk work and data analysis, invoking reasons related, inter-alia to, the continued absence of a regulatory framework for exploitation, uncertainties in the global economic conditions, as well as best industry practices. Although this fact does not constitute an instance of inadequate performance, the Commission considered it relevant to be brought to the Council's attention. The Commission also noted that some contractors have already asked for adjustments to their Plan of Work and/or Programme of Activities. Negotiations with the Secretariat on this are ongoing.

14. The Commission noted that a number of contractors referred to their training obligations and to the difficulties that arose in addressing training commitments foreseen for 2025, due to the decision of the Secretariat to discontinue some training options that had been negotiated and agreed with such contractors, in particular the deep dive and the national expert deployment programmes. While some contractors have successfully negotiated and agreed new schedules with the Secretariat, others are in the process of doing so. The Commission is aware of this fact and has considered such a situation, beyond the contractor's control, for the assessment of their training obligations as per this reporting year. The Commission further noted with concern that some contractors systematically defer their training obligations and as a result they now have multiple pending training obligations.

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The same is evident in the Cook Islands. DSV recommends authorizing mineral exploration as soon as possible through a permitted percentage of lease area with extractions tied to environmental monitoring. Following these evaluations, decisions can be made on the requirements for monitoring and opening up more ground. This process will be a staged introduction with environmental evaluations but it is only through experience that efficient and acceptable environmental practices will be developed. This will encourage more players and investment. It is clearly shown in research that mineral extraction can be done in an environmentally sound way but verification needs to come through starting the process. Wholesale mineral recovery will start gradually as companies will be looking for the best equipment to use and experimenting with different methods. The industry is in its infancy and the US has a chance to lead the world by implementing what it has always done best – encouraging entrepreneurs to take risk and solve difficult problems.

4. **DSV recommends removing the word “mining” from all official publications as mineral collection is not truly “mining”.** DSV recommends “mineral recovery” or “mineral collection”. The collection of polymetallic nodules does not involve digging into the seabed but rather the collection of unattached rocks lying on the seafloor. Since the topic of mineral collection is new to most Americans it is important that the correct nomenclature is used in order to convey an

accurate and honest picture of what is happening. Mineral collection will also include collection of trash and litter that has been deposited on the ocean floor – an otherwise impossible task for any governmental agency or private company to undertake.

5. **DSV agrees that 5 years is a suitable period for mineral collection companies to properly conduct exploration and develop the technology needed for collection and profitability.**

However, following this period, DSV ascertains that a royalty or profit-sharing system would be the most suitable for this new industry. Companies must quickly complete work and there must be a process to replace dormant contractors. The dispersion of minerals across the seabed is sporadic and, in many areas, (even after careful surveying) unpredictable. Developing a fair leasing setup would require a certain amount of uniformity to the mineral coverage which will never be the case. What could happen if a leasing payment system is setup (instead of profit-sharing) is that a company that is awarded a lease *may discover that their seabed does not in fact contain the amount of minerals that was expected*, leading that company to abandon the extraction work and no recovery would occur. There is also a disparity in the composition of the minerals, some nodules contain more cobalt than others for example. A profit-sharing regime acknowledges that the full scope of the recovery, transport and processing of the nodules is not yet known. There is no consensus yet on what the profit margins are for polymetallic nodules, unlike oil and gas fields where the exact numbers are very well known after years of production. In exchange, mineral companies must show immediate and concrete steps towards recovery otherwise a swift relinquishment of their tracts would result. In exchange for moving quickly and accepting risk of capital, BOEM would remove the risk of profitability from onerous lease payments and instead incentive and share in profits. It would be very difficult, if not impossible, for a company today to honestly bid on sea floor tracts with as many unknowns as currently exist -- and if a company were to do so there could be disingenuous intent behind the bid.

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We are prepared to provide additional information, including detailed environmental and operational plans, as BOEM progresses through the leasing process. We support BOEM's multi-step evaluation process, including the National Environmental Policy Act review and public consultations, and look forward to contributing data on geologic conditions, mineral potential, and environmental safeguards.

Thank you for the opportunity to contribute to this historic initiative. We are eager to partner with BOEM, the Department of the Interior, and the American Samoa community to responsibly unlock the potential of these critical mineral resources for the benefit of the United States and its territories.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tony Romeo', with a stylized, flowing script.

Tony Romeo
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