

July 17, 2026

Bureau of Ocean Energy Management
Office of Strategic Resources
Marine Minerals Division
45600 Woodland Road
Sterling, VA 20166

Subject: Odyssey Marine Exploration Comments on BOEM's Request for Information and Interest: Commercial Leasing for Outer Continental Shelf Minerals Offshore the Commonwealth of Virginia (BOEM-2026-0100-0001)

Marine Minerals Division, Office of Strategic Resources:

Odyssey Marine Exploration, Inc. ("Odyssey") appreciates the opportunity to respond to the Bureau of Ocean Energy Management's (BOEM) Request for Information and Interest (RFI) regarding a potential mineral lease sale offshore the Commonwealth of Virginia.

Odyssey submitted the original unsolicited lease request ("request") in November 2025 seeking a marine minerals lease sale to provide the opportunity to explore and potentially develop Heavy Mineral Sands (HMS) deposits within a defined U.S. Outer Continental Shelf (OCS) area.

As requested by BOEM through this RFI, Odyssey is submitting its comments as an interested party. Odyssey supports BOEM's effort to gather information from stakeholders and conduct a transparent, science-based review of the proposed area. The comments that follow reflect Odyssey's perspective on the technical, environmental, and commercial considerations associated with the proposed project and are intended to assist BOEM's evaluation as it moves forward with any future leasing decisions. Odyssey also incorporates by reference its prior submissions to BOEM in conjunction with its request.

Development of domestic offshore mineral resources represents a practical opportunity to strengthen domestic supply chains for critical minerals using established marine technologies and existing regulatory authorities.

The U.S. faces increasing vulnerability due to its reliance on foreign sources for critical minerals and rare earth elements (REE), many of which are concentrated within supply chains vulnerable to geopolitical disruption. HMS resources located on the OCS offer an opportunity to develop a secure domestic source of these strategic materials, including titanium-bearing minerals, zirconium-bearing minerals, and monazite, an important source of rare earth elements, to support critical manufacturing sectors while enhancing economic competitiveness, supply chain resilience, and national security.

Odyssey's interest in developing mineral resources in the proposed area relies on dredge-based technologies that have been used safely and effectively in U.S. waters for decades.

These methods are routinely employed for federal navigation projects, beach nourishment, marine aggregate extraction, and other offshore activities conducted under established federal and state regulatory programs. As a result, the proposed project would build upon existing operational expertise, environmental management practices, and regulatory frameworks rather than require the deployment of novel extraction technologies.

Consistent with BOEM's framework, any potential leases would be subject to environmental review using NEPA guidelines, stakeholder engagement, and regulatory approvals.

1. ODYSSEY'S INTEREST IN LEASING (Section 7)

Odyssey reaffirms its interest in securing one or more mineral leases within the RFI Area. The company is well positioned to responsibly execute the proposed project based on more than three decades of offshore exploration and marine operations experience, established internal capabilities in marine mineral exploration and development, and its collaboration agreement with Great Lakes Dredge & Dock (GLDD). As the largest dredging contractor in the United States, GLDD would serve as the contracted dredging provider should the project proceed. Together, Odyssey's technical expertise and GLDD's proven domestic operational capacity reduce execution risk and provide a strong foundation for responsible project development.

Areas of Interest

The areas identified in Odyssey's November 2025 unsolicited lease request remain the company's highest-priority areas of interest. These areas were selected through a systematic screening process designed to identify areas that offer strong resource potential while avoiding sensitive habitats, marine protected areas, and active maritime zones, as well as to respect conservation areas. While BOEM's RFI encompasses a broader planning area of approximately 2,764 square miles (7,160 km²), Odyssey's highest-priority area of interest represents approximately 1,000 km². Moreover, if a lease were ultimately awarded and the project advanced to production, Odyssey predicts its dredging activities would be expected to affect less than 2 km² annually, representing a very small fraction of both the RFI area and the company's area of interest.

Minerals of Primary Interest

Odyssey's primary interest is the exploration and potential development of HMS deposits containing titanium-bearing minerals, zirconium-bearing minerals, and rare earth element-bearing minerals, including monazite. Odyssey is also interested in evaluating secondary sand resources that may support beneficial uses such as coastal restoration and resilience projects.

Supporting Data and Rationale

Odyssey's indication of interest is supported by existing U.S. Geological Survey (USGS) and BOEM geological and geophysical datasets, the company's internal mineral prospectivity analyses, and regional geological analogs from Atlantic Coastal Plain heavy mineral deposits. Together, these information sources provide a reasonable technical basis for continued exploration and evaluation of the proposed lease area.

2. GEOLOGICAL AND RESOURCE INFORMATION (Section 6a, 6b)

Available geological and geophysical information indicates that portions of the OCS offshore Virginia contain unconsolidated sediment deposits with characteristics favorable for the occurrence and concentration of HMS. These sedimentary environments are consistent with known Atlantic Coastal Plain heavy mineral systems and may host concentrations of titanium-bearing minerals, zirconium-bearing minerals, and rare earth element-bearing minerals.

Odyssey's review of existing public datasets and regional geologic analogs suggests that these deposits may be amenable to delineation and recovery using conventional dredging and mineral processing techniques. Existing data further indicate the potential for co-located mineral and sand resources, which could support efficient resource development and multiple beneficial end uses.

Additional exploration activities, including geophysical surveys, coring, sampling, and resource characterization, would be necessary to further evaluate deposit thickness, grade, continuity, recoverability, and commercial viability. Odyssey recommends that BOEM continue leveraging existing USGS, BOEM, academic, and industry datasets to support future tract identification and environmental review efforts.

Odyssey is not currently aware of geological conditions within the proposed lease area that would preclude exploration activities. Site characterization efforts should continue to evaluate seabed conditions, geohazards, and potential archaeological resources to support responsible lease area development and project planning.

3. ENVIRONMENTAL AND MULTI-USE CONSIDERATIONS (Section 6c–f, j, k)

Odyssey supports BOEM's emphasis on environmental stewardship and multi-use compatibility on the OCS. Importantly, the proposed development approach builds on decades of experience demonstrating that marine dredging operations can be conducted safely, responsibly, and in coordination with other ocean users.

The requested lease area was developed through a screening process intended to avoid, to the extent practicable based on available information, marine protected areas, environmentally sensitive habitats, major navigation routes, military use areas, and other known competing ocean uses. Odyssey believes this approach provides a strong basis for environmental review while allowing BOEM to further refine lease boundaries based on stakeholder input and additional scientific information.

Similar dredging operations are routinely conducted throughout the Mid-Atlantic and have generated a substantial body of scientific and operational information that can inform environmental review, impact assessment, monitoring, and mitigation.

Any exploration activities would be planned and conducted in close coordination with relevant federal, state, and local stakeholders from the outset of the process. This includes coordination with the Department of War, other relevant military authorities, and other federal, state, and local agencies to ensure compatibility with existing uses of the area and to avoid interference with military training, readiness, navigation, and other operations vital to national defense and Virginia's maritime economy.

Odyssey recognizes the importance of identifying and protecting archaeological, cultural, and historic resources that may occur within or adjacent to the proposed lease area. Any future exploration activities should incorporate appropriate geophysical surveys, archaeological assessments, and consultation processes to identify potential resources and avoid or mitigate impacts consistent with applicable federal requirements. Where archaeological resources are identified, lease areas and future activities should be designed to avoid, minimize, or mitigate adverse effects as appropriate.

Fisheries and Ecosystem Considerations

Odyssey recognizes that the Mid-Atlantic coastal area supports commercially and recreationally important fisheries that contribute significantly to regional economies and coastal communities. Future exploration and development activities should be planned in coordination with fisheries stakeholders and incorporate adaptive management measures as appropriate. Project planning should also include seasonal and spatial operating measures, vessel management practices, protected species observers, real-time environmental monitoring, and adherence to applicable federal guidance to avoid and minimize impacts on protected marine species, including whales.

Navigation and Shipping

The RFI Area supports commercial vessel traffic, military operations, and recreational boating activity. Future lease delineation and project planning should incorporate vessel traffic analyses and coordination with the U.S. Coast Guard, maritime stakeholders, and port authorities to minimize interference with established navigation routes and ensure safe coexistence with other ocean users.

Odyssey believes that potential mineral development activities can be planned and conducted in a manner that is compatible with existing navigation and shipping uses through appropriate siting, scheduling, communication protocols, and operational controls.

Mitigation and Monitoring

Odyssey supports the use of established mitigation and monitoring measures appropriate to each stage of project development. These may include vessel speed restrictions within whale migratory corridors where appropriate, protected species observers, real-time environmental monitoring, and phased development supported by additional environmental review as project activities advance.

Future project planning, environmental review, dredging operations, vessel management, and sediment handling practices should be coordinated with the Commonwealth throughout the leasing and permitting process to ensure consistency with applicable coastal resource management objectives and policies.

4. OPERATIONAL AND TECHNICAL CONSIDERATIONS (Section 6g–h, I)

Potential exploration and development activities would utilize proven dredging and marine survey techniques widely used in U.S. waters. Odyssey anticipates working with GLDD, whose extensive experience in the Mid-Atlantic includes navigation channel dredging, beach renourishment projects and offshore sediment extraction and placement.

These activities are directly analogous to the methods required for mineral resource recovery in the RFI Area and demonstrate that the necessary technical capability already exists domestically.

The use of established dredging technologies offers significant advantages from both an operational and environmental perspective. The equipment, vessels, workforce, safety procedures, and environmental management systems necessary to support these activities already exist within the United States. As a result, development of offshore critical mineral resources can leverage existing domestic industrial capacity rather than require the deployment of unproven extraction technologies.

This project represents an opportunity to leverage existing American industrial capacity—rather than develop new or untested systems—to advance national mineral security goals.

If and when becoming an OCS lessee, Odyssey supports a phased development framework under which preliminary activities, resource delineation, pilot operations, and commercial development occur in successive stages, with appropriate BOEM review and environmental evaluation at each stage. This approach provides opportunities to incorporate new information, refine mitigation measures, and ensure environmentally responsible decision-making throughout the project lifecycle.

Potential activities would progress through successive phases and may include high-resolution geophysical surveys, coring and sampling programs, pilot-scale dredging, and, if supported by future regulatory approvals, commercial-scale dredging and material transport. Each phase would rely on established dredging technologies, with modifications appropriate for mineral recovery and material handling, and could be staged to minimize environmental disturbance while providing opportunities for BOEM review before subsequent phases proceed.

5. LEASING TERMS AND STRUCTURE (Section 6m–q)

The United States has a meaningful opportunity to develop domestic offshore critical mineral resources using established technology, experienced operators, and existing industrial capacity. Available geological information indicates meaningful resource potential, while decades of comparable dredging activity demonstrate that the operational capability already exists domestically.

Existing dredging and mineral recovery technologies provide a practical pathway for responsible resource development under established regulatory oversight. Delaying development risks prolonging dependence on foreign supply chains at a time of increasing global competition for critical minerals.

Odyssey stands ready to compete for lease opportunities, work collaboratively with BOEM, the Commonwealth of Virginia, fisheries representatives, and other stakeholders, and responsibly advance a project that supports domestic mineral security while maintaining strong environmental stewardship.

Lease Size and Configuration

We believe lease areas should consist of contiguous blocks sufficient to support commercially viable exploration, delineation, development, and production activities over the life of a project while allowing flexibility for BOEM to avoid sensitive resources, competing ocean uses, or other areas identified through stakeholder input and environmental review.

Royalty Framework

A royalty structure should incentivize early-stage development and reflect market variability and project risk while preserving incentives for continued investment over the life of the project. Consideration should be given to phased or sliding-scale royalty structures that recognize the significant upfront capital investment, exploration risk, and extended development timelines associated with offshore critical mineral projects, while ensuring an appropriate return to the American public over the life of production.

Rental Payments

Rental payments should reflect exploration and development timelines as well as geologic and operational uncertainty.

Primary Lease Term

Odyssey supports a minimum 20-year term for non-sand minerals providing sufficient time for delineation, permitting, and development, and opportunity for lease renewal at the end of the initial term

Auction Format

We suggest that BOEM consider competitive bidding formats that ensure transparency.

In addition to financial considerations, Odyssey supports the use of qualification requirements that ensure lessees possess the technical, operational, and financial capabilities necessary to responsibly advance offshore mineral projects. Such requirements help ensure that lease areas are explored and evaluated by capable operators with the resources and expertise necessary to conduct activities safely and efficiently.

6. POTENTIAL BARRIERS (Section 6r)

Odyssey believes the principal barriers to offshore critical mineral development include the complexity and duration of regulatory review and environmental permitting requirements, coordination among multiple federal and state agencies, market uncertainty for certain critical minerals, limited long-term processing and offtake infrastructure, and the limited availability of domestic mineral separation and processing capacity. Continued interagency coordination and clear regulatory pathways will help reduce uncertainty while maintaining appropriate environmental oversight. Addressing these barriers through clear regulatory pathways and coordination will support successful development.

Odyssey appreciates BOEM's thoughtful consideration of these comments and looks forward to continued engagement throughout the leasing evaluation process. We remain committed to supporting a transparent, science-based process that balances responsible resource development with environmental stewardship and the multiple-use management of the OCS.

Based on currently available geological information and prior analyses, Odyssey believes the RFI Area warrants further evaluation through BOEM's phased leasing process. The area appears prospective for commercially viable heavy mineral resources, development has the potential to advance U.S. economic, supply chain, and national security objectives, and a structured leasing process provides an appropriate framework for balancing resource development with environmental stewardship, stakeholder engagement, and multiple-use management of the OCS.

Such an approach would allow BOEM to gather additional information as activities progress while maintaining appropriate regulatory oversight and environmental protections.

For those interested in learning more about the proposed lease sale, additional information—including a non-technical summary—is available on our website: [Virginia Critical Minerals Project](#). Please contact our team (info@odysseymarine.com) with any follow up questions or to set up a meeting.

Respectfully,



Mark D. Gordon

Chief Executive Officer and Chairman of the Board of Directors
Odyssey Marine Exploration, Inc.