

Committee on Natural Resources
Subcommittee on Energy and Mineral Resources
Oversight Hearing
1334 Longworth House Office Building
March 20, 2024
2:15 PM

“Assessing Domestic Offshore Energy Reserves & ensuring U.S. Energy Dominance.”

Questions from Rep. Fulcher for Mr. Joe Dryer, President & CEO, Fairfield Geotechnologies:

1. *Can you discuss the latest technological advancements in seismic surveying and how they can improve the accuracy and depth of offshore energy resource assessments?*

The geoscience industry, through a global competitive market, continually advances technologies to better image the subsurface. Our industry is made up of technology companies that utilize computer processing capabilities second only to the U.S. military, allowing for ever faster processing times and delivery of more accurate imaging of the globe's subsurface.

In the recent past, the industry has been deploying ocean bottom nodes (OBN) and at an increasing pace the industry uses remote operated vehicles (ROV) or autonomous underwater vehicles (AUV) to place the nodes. The use of nodes, to receive the sound refraction from below the surface, allows for vast areas to be covered by data acquisition through fewer vessels on the surface. Further, acquiring data through use of nodes allows for larger offsets (wider angle) which has shown an increase in image quality and accuracy.

The geoscience industry is conducting 4D (time) surveys at a higher rate than in the past, allowing for the extension of the life of oil and natural gas producing basins, ensuring the industry is targeting energy dense resources with lowest footprint possible. Additionally, 4D surveys are the only viable solution to monitoring sites for CO₂ injection to ensure the carbon remains in the targeted location and whether the plume is migrating over time.

Further, advances in geoscience sources (compressed air sources) are allowing the industry to focus the sound produced at the lower frequencies which removes various marine life species from possible exposure to sound generated by our industry's activities. It is important to note here, as I included in my testimony, more than six decades of worldwide geoscience surveying and scientific research demonstrate that the risk of direct physical injury to marine mammals is extremely low, and there is no scientific evidence demonstrating biologically significant negative impacts on marine life populations. Geoscience survey activities are temporary and transitory, and are the most effective way to explore the earth's geology. In the more than 60 years of seismic surveying in the Gulf of Mexico, there has not been a single reported incidence of sound from seismic operations injuring marine life.

Today's advancements in technology, which can pinpoint the most fruitful areas for hydrocarbon potential, siting of wind turbines offshore and locating areas for carbon storage, have contributed to reducing the overall environmental footprint associated with energy exploration. Advances in the

technology we deploy have also helped to decrease operational and safety risks associated with energy development.

2. From your perspective, what are the major hurdles in conducting more comprehensive and up-to-date seismic surveys for the OCS and how might these be overcome?

Without question, the major hurdle to conducting a more comprehensive and up-to-date geoscience library evaluating the resources for the U.S. OCS, is bureaucratic delays and duplicative processes for permitting and environmental authorizations with little to no benefit for the marine environment and marine life. Unfortunately, the permitting of this activity critical to identifying the nation's energy supplies is too often stalled or impeded by groups opposed to the identification/imaged (mapped) energy source – whether wind, petroleum or natural gas – exploiting existing regulatory and litigation processes.

Starting at page 4 in my written testimony, “BOEM Permitting & NMFS Authorization Delays”, I provide detailed explanation of current hurdles to permitting, and suggestions on how the processes could be more efficient. Fairfield Geotechnologies, through our participation in the EnerGeo Alliance, urges congress to pass legislation to ameliorate the redundant processes such as the duplicative authorizations/consultation required within the Marine Mammal Protect Act (MMPA) and Endangered Species Act (ESA), which have twisted those statutes into something never intended resulting in ambiguity, uncertainty and costly delays in the permitting process.