



**NATIONAL
OCEAN
INDUSTRIES
ASSOCIATION**

Statement of

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before the House Subcommittee on Energy and Mineral Resources
for the oversight hearing on

"Leasing and Development of Oil and Gas Resources
on the Outer Continental Shelf"

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Mr. Chairman and members of the Committee, thank you for inviting me to speak before you today about leasing and development of oil and natural gas resources on the nation's Outer Continental Shelf (OCS). My name is Tom Fry, and I am the President of the National Ocean Industries Association, which represents nearly 300 companies working to explore for and produce energy resources from the OCS in an environmentally sensitive manner.

I am here today also representing the Independent Petroleum Association of America, the US Oil & Gas Association, the American Exploration and Petroleum Council, the International Association of Drilling Contractors, the American Petroleum Institute, the Natural Gas Supply Association, and the Petroleum Equipment Suppliers Association. Together, we represent thousands of companies, both majors and independents, engaged in all sectors of the U.S. oil and natural gas industry, including exploration, production, refining, distribution, marketing, equipment manufacture and supply, and other diverse offshore support services.

Through the development and application of technology, as well as adherence to a scientifically rigorous regulatory process, the companies of the offshore industry continue to improve their ability to bring new supplies of oil and natural gas online. For over fifty years, these companies have learned how to operate in deeper and deeper waters and locate resources that were once not accessible. At the same time, the technological advances pioneered by these companies

have allowed for less impact on the environment and a wise stewardship of the resources beneath the ocean.

The need to safely harness these domestic energy sources is amplified by recent trends which show still-increasing American dependence on foreign sources of oil amidst a global economic downturn which has stifled energy prices from their record highs of last year. But when global economic conditions improve in the future, demand for energy will increase and we must begin preparing for this reality today.

Certainly, conservation and efficiency gains are the most immediate means to lowering energy use and helping to moderate prices in the short term. Simultaneously, renewable and alternative energy sources are growing every day and aggressive investment in these sectors must continue. As witnesses from the U.S. Energy Information Administration and the International Energy Agency recently testified before this committee, we must also face the fact that traditional fossil energy will continue to play the predominant role in meeting our energy needs for decades to come.

This reality dictates that responsible domestic production of these resources be encouraged, not hindered; and that risk and innovation aimed at improving our understanding of how better to find and produce oil and natural gas be rewarded, not punished.

Simply stated, given renewable energy sources' limited contribution to the current energy portfolio, and the massive investments and long time horizons needed to grow them to any meaningful level, the world will require more oil and natural gas to meet future energy demand. The oil and gas industry can increasingly produce these resources here in America safely and cleanly, including from the OCS.

New Areas Hold Unknown Potential

The United States' OCS is conservatively estimated by the Minerals Management Service (MMS) to hold undiscovered technically recoverable resources of over 419 trillion cubic feet of natural gas and 86 billion barrels of oil.

That's estimated to be enough natural gas to heat 100 million homes for 60 years, and enough oil to drive 85 million cars for 35 years or to replace current Persian Gulf imports for almost 60 years.

In fact, there may be even more than that. In the parts of the Gulf of Mexico (Gulf) where industry has been allowed to buy leases and explore, they have found about five times as much oil and three times as much natural gas as was once thought to be there. In 1987, MMS estimated that the Gulf of Mexico held about 10 billion barrels of oil and 100 trillion cubic feet of natural gas; yet, earlier

this decade the Gulf was estimated to have 45 billion barrels of oil and 230 trillion cubic feet of gas yet to be discovered, in addition to the 6 billion barrels of oil and 75 trillion cubic feet of gas already produced since the 1987 estimates. The more industry explores, the more they find.

I know the Chairman has personally seen OCS oil and gas facilities such as Independence Hub and Thunder Horse on a past offshore trip with MMS officials, and recommend that all committee Members see it for themselves. Twenty years ago, the part of the Gulf visited by the Chairman was not well understood and exploration had not started, thus explaining the significantly underestimated resources.

Technology and the actual act of drilling led to some of the incredible finds of the OCS. Independence Hub has the capability of producing a billion cubic feet of gas per day. Thunder Horse has the capacity of producing 250,000 barrels of oil per day. The five fold estimate increase may not be the case in all places, but it does appear to be clear that the more industry looks, the more they find. Imagine the potential of those places where exploration has been off-limits for over 25 years. We need that information and we can have it with no cost to the taxpayer.

Another way to quantify the energy potential held within new OCS areas is to examine the size of those offshore areas producing our energy now. The OCS currently is producing 27% of the entire U.S. oil production. However, that 27% of domestic oil production comes from only one half of one percent of the 1.7 billion acres of OCS lands.

When you consider how much oil is coming from a comparatively small amount of land, it becomes increasingly clear just how much potential resource may exist in areas in which we haven't looked.

As decision makers, Congress doesn't have all of this information. The information we do have is often over thirty years old and reliant on outdated technology. We know there are plenty of areas where oil and gas exploration may not be compatible with the landscape. We also know there will be parts of the ocean where resources will not be present or will not be economic. With talk of opening up areas or closing some down, shouldn't we increase our knowledge base so we can have an informed discussion about the consequences?

Safely Providing Energy and Jobs

Producing energy from previous moratoria areas in the OCS also holds the potential for hundreds of thousands of jobs and hundreds of millions of dollars in revenue. According to a recent study, oil and natural gas resources in former or current OCS moratoria areas could generate \$1.3 TRILLION in additional federal, state, and local government revenue, and over 76,000 jobs. Importantly, we

already know that these will be family-supporting jobs, as oil and gas exploration and production wages averaged \$93,575 per year, according to 2007 Bureau of Labor Statistics data -- over twice the average annual pay of \$44,458 across all US industries.

These are significant resources that can be developed safely and that we ignore to our consumers' disadvantage. Yet until last year, more than 85 percent of the nation's OCS around the lower 48 states was off limits to oil and gas exploration because of presidential withdrawals and congressional moratoria, even though 1.4 million barrels of oil is produced from the OCS every day with less than .001 percent spilling into the ocean from drilling and extraction, according to MMS.

Similarly, as Chairman Costa often notes, a 2002 National Academy of Sciences (NAS) report entitled "Oil in the Seas III" found that less than 1% of oil in North American waters is from drilling and extraction, while 63% comes from natural seepage and the remainder from non-point sources. Clearly, the offshore oil and gas industry enjoys an enviable environmental record, and we appreciate committee members and witnesses alike recognizing this fact in hearings earlier this year.

Moving Beyond Slogans

Also mentioned in earlier hearings was the Chairman's desire to move beyond the "Use It or Lose It" and "Drill, Baby, Drill" slogans of last year. I agree it is important to have a serious discussion about the pace and development of offshore leases and appreciate these hearings presenting such a forum. Perhaps citing a real world example may help in this regard.

In the mid 1990's deep water was considered anything over 1,000 feet and not terribly far offshore, operating on what is known as "the shelf". But at that same time some companies bought leases in thousands of feet of water over a hundred miles from shore. They essentially placed a bet on themselves and advancing technology that might allow them to deal with water depths of almost two miles and drilling and producing depths of six miles or more. In addition, much of this area beneath the ocean floor is patterned with thick layers of salt, in some cases thousands of feet, that at the time prevented accurate seismic readings.

While some of these leases ended up having producible resources, many did not. Even many of the leases that had economically recoverable quantities were too technically difficult to produce for many companies. This resulted in leases that were turned back into the government because either the lease term had run its course or the tract was not deemed prospective enough.

Then in March of last year, the federal government conducted the largest lease sale in OCS history. Why? While not the only factor, a large part can be attributed to the availability of some of these same deep water tracts that had been turned back in. Seismic technology has greatly improved to get a better understanding of resources below the salt. Platforms and drill ships now can work and handle the water depths and pressures associated with 10,000 feet of water and total depths over 30,000 feet.

That sale is the very essence of “use it or lose it.” The companies that made it work are producing. The ones that could not turned in their leases after having previously paid bonuses and rentals, while those same blocks were leased back out for a combined sale of over \$3.6 billion dollars to the taxpayer.

Looking at utilization rates of offshore drilling rigs can also help to illustrate the pace with which offshore leases are being developed. Toward the end of last year, nearly 90 percent of the roughly 700 offshore drilling rigs in the global fleet were being utilized. In the U.S. Gulf, about 90 rigs were working, including a record of close to 15 drillships in deep water and ultra-deep water. Daily rental rates for the newest generation of drillships reached as high as \$650,000 a day.

While the global economic downturn is expected to lead to some reductions in the exploration and production budgets of some companies, the drilling market in the deep Gulf should remain fairly positive, according to many drilling contractors. At the start of 2009, about 120 rigs were on order in shipyards. Subsea equipment suppliers predict an active year for components such as subsea completions and shut off valves.

A Process Shaped by Science and Stakeholders

Another commonly discussed issue in previous committee hearings is the desire that science-based decision making guide our national energy and environmental policy. This standard certainly is worthy of following, and indeed the current process of allowing for offshore exploration and production of natural gas and oil is rich with public input, deliberate in its manner, and is certainly exposed to the utmost scientific scrutiny and examination.

In order for oil and gas to ultimately be produced from the offshore, the process must essentially go through four separate phases: development of a Five Year OCS Leasing Program, planning for a specific lease sale within that Program, preparation of an Exploration Plan, and finally the preparation of a Production Plan. During the course of these various phases, no less than half a dozen separate environmental reviews are conducted.

Additionally, under the Coastal Zone Management Act (CZMA), all these activities must be consistent with a given coastal state’s science-based Coastal Zone Management Plan. Enacted in 1972, the CZMA created a national,

science-driven program intended to comprehensively manage and balance competing uses of, and impacts to, coastal resources. The CZMA's consistency provisions require the federal government to certify that its activities are consistent with the scientific policies of a state's federally approved coastal management plan.

In fact, when working their way through the regulatory processes inherent with offshore production, oil and gas companies must abide by a long series of statutes which ensure science-based decision making, including: CZMA, the National Environmental Policy Act, the Endangered Species Act, the Marine Mammal Protection Act, the National Marine Sanctuaries Act, the Outer Continental Shelf Lands Act, the Clean Air Act, the Clean Water Act, and many others.

Stringent regulatory oversight helps maintain environmental performance, as offshore operators work under at least 17 major permits and must follow numerous sets of federal regulations from across several different federal agencies -- including MMS, the Environmental Protection Agency, the U.S. Coast Guard, the National Oceanic and Atmospheric Administration, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service – each of which impart their own scientific rigor into their various rulemaking and permit granting processes.

For decades, the offshore oil and gas industry has relied upon science-based decisions to guide their operations; and will continue to do so as new innovations allow them to explore more areas.

A Source of Constant Technological Innovation

Today's offshore technology allows us to produce more energy by reaching places that would never before have been possible. New world records are always being set.

Industry recently set one of these records by drilling a well in water depths exceeding 10,000 feet. That's the equivalent of successfully navigating nearly two miles down from the surface of the ocean before even beginning to drill, sometimes another 30,000 feet into the earth below the sea floor. The technology required to drill, complete and produce this type of well must overcome an environment of high pressure (in excess of 20,000 pounds per square inch) and high temperature (exceeding 350°F). Deep wells such as this are expensive, costing as much as \$100 million apiece.

After coming from the ground, the oil or natural gas then travels through a pipeline where the temperature is just above freezing and the formation of ice crystals threatens to block the flow unless constantly supervised and adjusted. At depths far beyond where humans can travel, sometimes as much as 5,000

feet or more below the ocean surface, Remotely-Operated Vehicles (ROVs) are used to perform maintenance and repairs.

All this is possible with fewer facilities and less impact – even visual -- than ever before. For example, multiple subsea wells can be connected by tiebacks to a single platform over great distances. Such an installation is capable of reaching wells on the ocean floor dozens of miles away in all directions while connecting to an ocean surface platform one mile above.

Directional drilling also allows for extraction of resources which are miles away from the point where the actual well is drilled.

This cutting edge technology doesn't come cheap, however. The total cost of this type of project, including wells drilled and the subsea connection system, can exceed \$5 billion.

An Exemplary Record of Environmental Protection and Stewardship

The outstanding environmental record of U.S. companies operating offshore around the world is well recognized as *...technologies are allowing the offshore industry to venture into deeper waters than ever before, while protecting marine life and subsea habitats...*¹ -- even in the most challenging areas such as the Arctic and North Sea and in otherwise catastrophic weather.

Off the part of our coast in which exploration and production has historically been allowed, the safety of our operations was recently demonstrated in the most severe hurricane situations. Though many of the exploration and production facilities in the Gulf of Mexico were severely damaged or destroyed, the high-tech safety and environmental protection equipment and processes worked.

Careful scientific environmental study and operational planning always precede OCS activity. For example, our offshore geophysical companies, which conduct seismic work that allows us to “see” geologic structures beneath the seabed, have worked with the National Marine Fisheries Service and MMS to implement many procedures and practices designed to avoid harm to marine mammals, including:

- Monitoring for the presence of animals of concern
- Shutdown or no start-up when they are too close
- Slow, gradual ramp-up of operations just in case

¹ Clinton Administration DOE report: *Environmental Benefits of Advanced Oil and Gas Exploration and Production Technology*, 1999.

During exploration, jack-up or semi-submersible rigs and drill ships have multiple systems and physical barriers to ensure that no spill occurs. Most important, along with multiple, redundant remote control systems, are “blowout preventers” which in deepwater are installed on the well at the seabed and are capable of immediate closure in event of any emergency.

Also, a “downhole safety valve” in the well itself below the seabed provides an added protection barrier in the event of some catastrophic event.

As a result of these safeguards, the offshore oil and gas industry has a laudable environmental record, as noted in the previously mentioned “Oil in the Seas III” NAS study, which finds that although the amount of oil produced and transported on the sea continues to rise, improved production technology and safety training of personnel have significantly reduced both blowouts and daily operational spills.

The industry remains under intense scrutiny by its two primary regulators — the MMS and the U.S. Coast Guard— as well as a host of other governmental agencies with oversight responsibilities such as the Environmental Protection Agency and the National Oceanic and Atmospheric Administration. However, it is the MMS that regulates all exploration, development, and production activities on about 8,000 active leases to ensure that these activities are conducted safely and in an environmentally sound manner. The MMS reviews and approves industry exploration and development plans before allowing any operations to commence, monitors all lease operations to ensure that industry is in compliance with relevant requirements, and conducts scheduled and unscheduled inspections. In 2008, MMS conducted over 25,000 inspections of OCS facilities.

To summarize, the latest technology and sound management practices not only allow for the continued production of domestic energy resources, but they have also made the U.S. offshore industry the envy of the world. Its environmental record is superb:

- Since 1985, more than 8 billion barrels of oil were produced in federal offshore waters with less than 0.001 percent spilled — a 99.999 percent record for clean operations.
- There has not been an incident involving a significant oil spill from a U.S. exploration and production platform in nearly 30 years (since 1980).
- Government statistics show that the injury and illness rate for offshore workers is about 70 percent lower than for all of private industry.

- Today's modern technology includes such environmental protections as automatic subsea well shut-in devices, including sub-seabed safety valves.

As mentioned earlier, the industry's performance during the 2005 hurricanes, which moved through a core area of offshore operations, is instructive. While it is true that 115 platforms were destroyed, the storm threatened over 3,000 facilities, the vast majority of which survived. Despite sustained winds reaching 170 miles per hour and towering waves and the resulting destruction of numerous platforms and rigs, there was no significant spill from production wells and no injury or loss of life among the 25,000 – 30,000 workers who are offshore at any given time.

Because today's weather forecasting capabilities provide ample lead-time as storms approach, operators are able to follow routine shutdown and evacuation procedures. In the case of the Katrina, Rita, Gustav, and Ike hurricanes, 100% of oil production was shut-in ahead of the storms.

Conclusion

The offshore oil and natural gas industry will continue to make advances in the development of new technologies, and to abide by the science-based regulatory processes which guide their operations. This innovation and adherence to scientific rigor will allow the industry to keep bringing reliable supplies of energy to market while also ensuring the safe and efficient management of the nation's energy resources.

Thank you for allowing me to be here with you today.