

The Science behind Discovery: Seismic Exploration and the Future of the Atlantic OCS

House Committee on Natural Resources: Subcommittee on Energy and Mineral Resources

Oversight Hearing on “The Science behind Discovery: Seismic Exploration and the Future of the Atlantic OCS”

January 10, 2014

Witness Panel

Dr. Walter Cruickshank, Ph.D.

Deputy Director, Bureau of Ocean Energy Management

Mr. Paul Barnes

Manager-Atlantic Canada, Canadian Association of Petroleum Producers

Dr. James H. Knapp, Ph.D.

Chair, USC Faculty Senate and Professor, Department of Earth and Ocean Sciences, School of Earth, Ocean & Environment, University of South Carolina

Mr. Richie Miller

President, Spectrum Geo, Inc.

Dr. Donald F. Boesch, Ph.D.

President, University of Maryland Center for Environmental Science

Committee Members Present

Doug Lamborn (R-CO), Chairman

Rush Holt (D-NJ), Ranking Member

Rob Wittman (R-VA)

Niki Tsongas (D-MA)

Frank Pallone (D-NJ)

Bill Flores (R-TX)

Dan Benishek (R-MI)

Alan Lowenthal (D-CA)

Jim Costa (D-CA)

Jeff Duncan (R-SC)

Katherine Clark (D-MA)

On January 10, the House Subcommittee on Energy and Mineral Resources held a hearing to discuss seismic exploration on the Mid- and South Atlantic Outer Continental Shelf (OCS). Various oil and gas industries are interested in developing hydrocarbon resources in the Mid- and South Atlantic OCS, and marine seismic surveying (which analyzes the oceanic subsurface) is the first step in deep-water resource exploration..

Walter Cruickshank, Deputy Director of the Bureau of Ocean Energy Management (BOEM), has been writing the Programmatic Environmental Impact Statement (PEIS) for seismic surveying in the Mid- and South Atlantic OCS since 2009 in order to determine the impacts of seismic surveying on marine life in the Atlantic. Dr. Cruickshank testified that the PEIS is being conducted in response to “thirteen permit requests from nine companies for seismic airgun surveys.” Oil and gas companies and congressional proponents want to expedite publishing of the final PEIS, set for March 2014, in order to begin exploration. The

PEIS does not authorize seismic activity, rather provides an avenue for each proposed site to then undergo environmental evaluation.

The last seismic surveys were conducted in 1988 and new 3D/4D surveying technology can better map the subsurface, allowing for new discovery of potential oil/gas/mineral resources. Oil reserve estimates in the Gulf of Mexico multiplied by a factor of five in the advent of 3D utilization. Richie Miller, President of Spectrum Geo Inc. Americas division, testified that if the Atlantic Basin were explored, estimates of its hydrocarbon reserves could similarly increase.

According to professor of seismology at the University of South Carolina, James Knapp, recent research has demonstrated the absence of a large volcanic province on the Atlantic passive margin. Because current estimates of hydrocarbon abundance in the Atlantic OCS are based on an inaccurate interpretation of volcanism, Knapp reasoned the estimates are conservative. Coupled with non-intrusive surveying, he commented that this data could present a “truly historic opportunity” to correct previous estimates of resources on the OCS.

Proponents of offshore exploration, led by Subcommittee Chairman Doug Lamborn (R-CO), endorsed the approval of seismic surveying. They reasoned that the potential benefits that could result from drilling, such as jobs and independence from foreign energy sources, far outweigh potential environmental impacts.

Paul Barnes from the Canadian Association of Petroleum Producers (CAPP) testified that due to seismic surveying off Canadian coasts, oil and gas production within the country has helped the economy, contributing to up to 30 percent of their gross domestic product. Barnes stated that mitigation measures by the U.S. and Canadian surveying industries, although only subject to their respective national laws, comply with International Association of Geophysical Contractors (IAGC) guidelines, which include having marine mammal observers aboard vessels, nightly passive acoustic monitoring, and cooperation with fisheries.

BOEM cooperation with the Fish and Wildlife Service has contributed to a detailed evaluation of acoustic sounding impacts on marine life. While no known fatalities have occurred as a result of soundings, there are documented behavioral changes in marine life. Proponents of surveying argued the zero fatality findings, while opponents underscored behavioral changes as a significant topic of further research.

Democrats’ reluctance to support Mid- and South-Atlantic OCS exploration was mostly due to the potential environmental impacts of prospective drilling, harkening back to the Deepwater Horizon Spill in 2010. Donald Boesch from the Oil Spill Commission Action (OSCA) reaffirmed that the BP spill was completely preventable, and that key Commission recommendations for general and environmental safety have still not been approved by Congress.

Mr. Miller indicated that geological and geophysical techniques can also identify suitable areas for offshore renewable energy. Ranking Member Rush Holt (D-NJ) mentioned the potential of Atlantic Coast wind energy, which the Department of Energy estimates could generate more than 4,000 gigawatts.

Opening statements, witness testimony, and an archived webcast of the entire hearing can be found on the committee website.