

# Subcommittee on Energy and Mineral Resources

Paul Gosar, Chairman  
Hearing Memorandum

January 17, 2018

**To:** All Subcommittee on Energy and Mineral Resource Subcommittee Members

**From:** Majority Committee Staff, Kate Juelis (x6-9837)  
Subcommittee on Energy and Mineral Resources

**Hearing:** Oversight Hearing entitled “*Deficiencies in the Permitting Process for Offshore Seismic Research*”  
**January 19, 2018 at 9:00 a.m.; 1324 Longworth House Office Building**

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The Subcommittee hearing will take place on **January 19, 2018, at 9:00 a.m., in 1324 Longworth House Office Building**. This hearing will identify and examine regulatory obstacles to offshore geological and geophysical resource surveying on the outer continental shelf.

## **Policy Overview:**

- Acoustic seismic surveying is used to collect valuable information regarding offshore geological structures. The data gathered through the surveying process is used by a myriad of stakeholders, including the federal government, energy production companies, and research scientists to make informed decisions regarding natural resource management of our federal offshore resources.
- Unfortunately, politicization of the seismic survey permitting process crippled our nation’s ability to quantify our offshore resource potential.
- The hearing examines the failings of this permitting process, including the deficiencies outlined in a December 2017 Government Accountability Office (GAO) report entitled “*Offshore Seismic Surveys: Additional Guidance Needed to Help Ensure Timely Reviews.*”

## **Invited Witnesses (in alphabetical order):**

*Dr. Walter Cruickshank, Ph.D.*  
Acting Director  
Bureau of Ocean Energy Management  
Washington, D.C.

*State Senator Tom Davis*  
District 46  
South Carolina Legislature  
Columbia, SC

*Mr. Jon Ludwigson*  
Acting Director  
Government Accountability Office  
Denver, Colorado

*Mr. Ryan Steen*  
Partner  
Stoel Rives, LLP  
Seattle, Washington

## **Background**

### *Understanding Offshore Resource Potential on the Outer Continental Shelf*

Acoustic seismic surveying is the most effective and least intrusive scientific technique for gathering geologic data beneath our oceans. This research is conducted to examine a specific subsurface area, in order to construct a map or plan of the underlying formations. At the present time, little is known about the geology of America's outer continental shelf (OCS) lands. In fact, seismic surveying has not been conducted on most of the Atlantic, Pacific, and Alaskan OCS regions in over thirty years.

Seismic information has real value and impact beyond oil and gas resource management – surveying yields data used to understand tectonic structures, plan and execute military functions, and to develop offshore renewable energy projects. This data is used to keep our nation safe, and to understand and plan for earthquakes, tsunamis, national security threats, and a diversified and dynamic energy economy. Given this importance, it is critical that stakeholders are able to pursue their research within an effective and predictable regulatory framework.

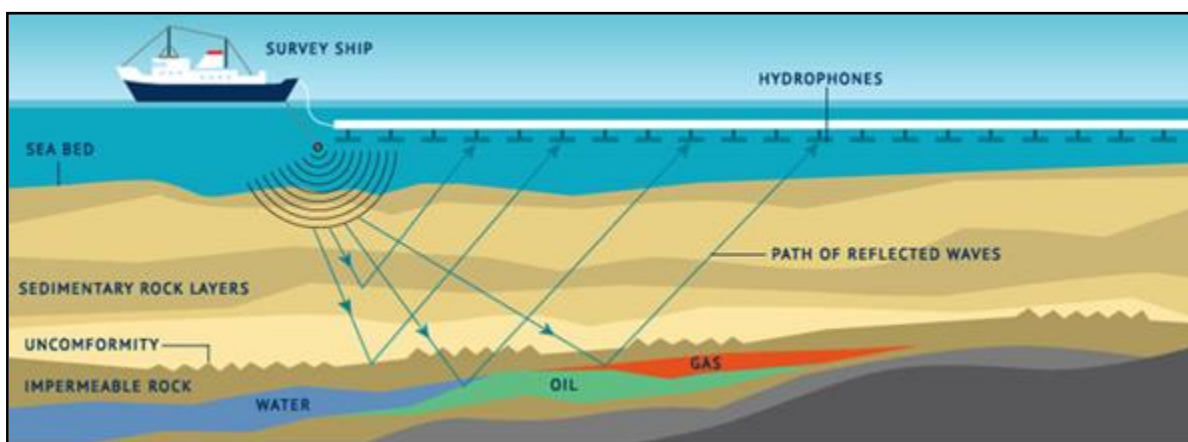
A primary application of seismic data is for offshore oil and gas development. It should be noted, however, that seismic surveying and oil and gas leasing are two entirely separate activities, both from a regulatory and business perspective. Seismic information is used to inform potential future oil and gas leasing and production decisions. For instance, the Bureau of Ocean Energy Management (BOEM) utilizes the information to determine the value of an offshore reservoir during the leasing process, ensuring that taxpayers receive full value from a lease sale. The agency and operators further rely on seismic imaging to determine potential pressures and safety standards during the drilling and production phases. This information is critical to policymakers as they evaluate resource potential in light of global crude and gas markets, and to achieve and maintain long-term national energy security.

Understanding our offshore resource potential has international consequences as well. While developments in onshore fracking technology elevated the U.S. to an international energy heavy weight, our nation's proven offshore oil and gas resources continue to provide reliable and safe production that solidified our position. Other nations rely on accurate, current hydrocarbon reserve estimates when making production agreements that influence global markets. Unfortunately, federal regulatory dysfunction in the U.S. continues to hamstring our ability to

collect seismic surveying data. America's Atlantic OCS is the only Atlantic margin that is not currently explored or produced, despite hydrocarbon development having occurred off of Eastern Canada, throughout the Caribbean, Mexico, Colombia, Venezuela, Brazil, Uruguay, and Argentina. Across the sea, international investment has poured into numerous West African countries. By understanding their resource potential through seismic surveying, these nations are attracting foreign investment and positioning themselves as international players.

### *Seismic Surveying Technology*

Seismic surveying has been conducted around the world for decades, and for a variety of scientific purposes. On the American OCS, deep-penetration and high-resolution seismic surveying is used to gather images of subsurface formations. The surveying process essentially takes an "ultrasound" of underlying formations by using sound to produce images. Mechanically generated acoustic waves are issued from surveying vessels, which capture returning waves using an array of receiving phones, or seismophones. The area covered, decibel level of acoustic wave generated, and duration of the survey depend on the purpose of the survey and the type of scientific data sought.<sup>1</sup>



*Figure 1: Seismic Surveying Process<sup>2</sup>*

A common misconception about seismic surveying suggests that acoustic waves generated might harm marine life. To date, however, there is no data whatsoever to suggest that seismic surveying has ever harmed or killed a marine mammal, and otherwise has had no effect on marine mammal populations. BOEM, which reviews and grants OCS geological and geophysical (G&G) survey permits, has spent over \$50 million investigating marine health, and has found no evidence of any cumulative effects on marine populations.<sup>3</sup> The agency has repeatedly clarified this point, noting that any potential links between seismic surveying activity and "...the sustainability of species or stocks have not been demonstrated."<sup>4</sup>

<sup>1</sup> ENERGY CITIZENS, OFFSHORE DRILLING: SEISMIC SURVEYS, <https://energycitizens.org/issue/offshore-drilling/seismic-surveys/>

<sup>2</sup> *Id.*

<sup>3</sup> International Association of Geophysical Contractors, General and Atlantic OCS Seismic Factsheet, October 4, 2017.

<sup>4</sup> BOEM SCIENCE NOTES: Applied Science for Informed Decision Making, March 9, 2015.

## *Statutory Authorities*

Several agencies and a series of overlapping statutes govern the seismic survey permitting process. To conduct an offshore seismic survey for the purposes of offshore oil and gas research, an operator must obtain a G&G permit from the BOEM.

Depending on the location of the proposed survey and potential impact on marine mammals, applicants must also obtain an incidental take authorization from the National Marine Fisheries Service (NMFS) or the US Fish and Wildlife Service (FWS). The incidental take authorizations (ITA) permit a proposed activity to unintentionally “take” a small number of marine mammals within the specified region.<sup>5</sup> The Marine Mammals Protection Act (MMPA, Public Law 92-522) defines the term “take” to encompass any activity that hunts, captures, or kills, any marine mammal or attempts to do so.<sup>6</sup> The incidental taking may be of a small number of marine mammals, and have no more than a “negligible impact” on the marine mammal species or stock, and must not have an “unmitigable adverse impact” on the availability of the species or stock for “subsistence” uses.<sup>7</sup> An incidental harassment authorization (IHA) is a specific type of ITA that authorizes activities that have the potential to “harass” a marine mammal, and is effective for up to one year.<sup>8</sup> The authorizations include permissible methods of taking, as well as monitoring and reporting requirements.<sup>9</sup> Should an operator incidentally take a marine mammal without a permit, the operator is subject to penalties set out under federal law. NMFS and FWS have a total of 120 days to issue an IHA once the agency receives an application.<sup>10</sup>

In addition to MMPA compliance, an application must satisfy elements of the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. 4321 et seq.) and the Endangered Species Act of 1973 (ESA, 16 U.S.C. 1531 et seq.). NEPA requires all federal agencies to evaluate environmental effects of actions they propose, fund, or approve.<sup>11</sup> As such, BOEM must evaluate the environmental effects of approving a G&G permit. Additionally, NMFS or FWS must also evaluate the potential environmental impact of issuing an IHA. To increase efficiency, a tiering system is used, allowing an agency to utilize information from an existing environmental impact statement or assessment when conducting the required site-specific assessment.

Section 7 of the ESA applies to the seismic survey application process as well. According to this section, federal agencies must ensure that actions authorized, funded, or executed will not likely jeopardize the continued existence of any endangered or threatened species, or result in the destruction or adverse modification of the species’ critical habitat.<sup>12</sup> Depending on the species at issue, consultation with NMFS or FWS is required to assess the potential effects of the proposed actions.

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<sup>5</sup> 16 U.S.C. 1371 (a)(5)(A), (D).

<sup>6</sup> 16 U.S.C. 1362.

<sup>7</sup> *Supra* Note 3, (D).

<sup>8</sup> NOAA FISHERIES: Incidental Take Authorizations under the MMPA, <http://www.nmfs.noaa.gov/pr/permits/incidental/>

<sup>9</sup> *Id.*

<sup>10</sup> 16 U.S.C. 1371(a)(5)(D)(iii).

<sup>11</sup> 42 U.S.C. 4321-4347.

<sup>12</sup> 16 U.S.C. 1536.

Additionally, BOEM’s seismic survey permit review process has developed differently in different geographic regions based upon the discretion of the agency. Historically, for permitting off the Atlantic and Alaskan coasts, the applicant generally applies to both BOEM (for a G&G permit) and to either NMFS or FWS (for an IHA). For applications for surveying in the Gulf of Mexico, the applicant typically submits only an application to BOEM for a G&G permit.<sup>13</sup> Because the Gulf of Mexico has a long history of offshore seismic surveying and energy development, BOEM does not require an incidental take authorization for survey applications in this region. However, applications for permits on the Alaskan and Atlantic OCS are required because the agency considers these regions “frontier” offshore areas, where the impact of seismic survey activity on marine mammals is less certain.<sup>14</sup> Please see *Figure 2*, below, which summarizes the seismic survey permit application process, as it varies by region.

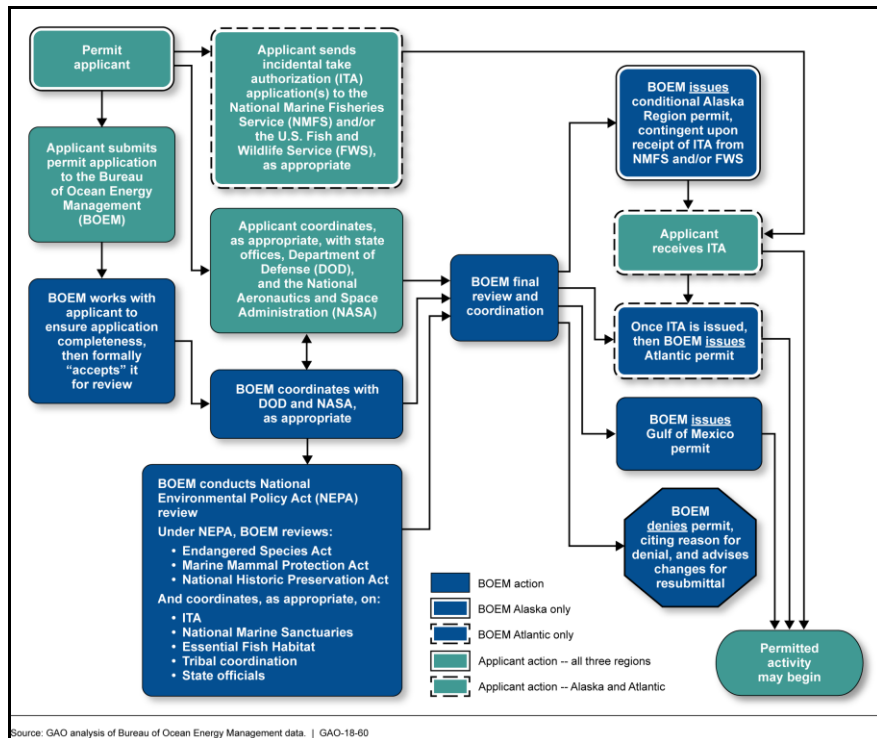


Figure 2: Diagram Depicting Seismic Permitting Process for the Alaska, Atlantic, and Gulf of Mexico Regions<sup>15</sup>

In 2002, environmental groups raised concerns about the potential effects of seismic testing on marine mammals in the Gulf of Mexico. In response, BOEM began working with NMFS, which oversees marine mammal species in the region, to develop regulations for the incidental take of marine mammals in the Gulf. Concurrently, environmental organizations sued the Department of the Interior (DOI), alleging that BOEM violated NEPA in finding that seismic activities had no significant impact on marine life.<sup>16</sup> In 2013, parties agreed to a temporary stay

<sup>13</sup> GOVERNMENT ACCOUNTABILITY OFFICE, GAO-18-60, OFFSHORE SEISMIC SURVEYS: ADDITIONAL GUIDANCE NEEDED TO HELP ENSURE TIMELY REVIEWS, (2017), p. 12.

<sup>14</sup> *Id.* at 14.

<sup>15</sup> *Supra* Note 13, p. 13.

<sup>16</sup> *Supra* Note 13, p. 15.

of all proceedings until further action was agreed upon, outside of the courts. At the present time, the stay has been extended through November 2018.<sup>17</sup>

### *Regulatory Dysfunction*

In December 2017, GAO published a report entitled “*Offshore Seismic Surveys: Additional Guidance Needed to Help Ensure Timely Reviews.*” The report detailed the complicated, burdensome process for seismic research, and identified specific instances of inefficiency, duplication, and potential abuse of agency discretion. The study, which examined G&G and IHA permit applications from 2011 to 2016, highlighted the critical importance of clear guidance when it comes to the seemingly simple, commonsense steps throughout the permitting process.

BOEM, which does not have statutorily imposed permit review times, internally aims to approve seismic applications for high-resolution testing in the Gulf within 40 days, and deep penetration permits within 70 days.<sup>18</sup> The vast majority of these permits were reviewed and determinations were made within 100 days.

However, GAO found an incredible lack of diligence at NMFS and FWS. The MMPA requires these agencies to review and issue an IHA within 120 days.<sup>19</sup> Neither agency was able to provide accurate data on the processing dates of the 35 applications received, citing an absence of regulatory guidance that describes how to accurately record review start dates. While both agencies have general guidance on what constitutes an “accurate and complete” application, there is no consistent or formal requirement for recording the start date.<sup>20</sup> According to NMFS, “determinations of whether an application is adequate and complete have historically varied by staff member, with some staff waiting until all outstanding questions are resolved with an applicant before deeming the application adequate and complete, and others considering an application to be adequate and complete if more substantive questions are answered...”<sup>21</sup> In two troubling instances, staff members waited until ITAs were published in the Federal Register to record the “adequate and complete” date, thus placing the review start date after publication.<sup>22</sup> Because the adequate and complete date was never recorded in a consistent manner, neither agency was able to determine whether they were meeting their statutory time frames for reviewing incidental take authorizations.

As GAO’s report reiterated, the failure for agencies to have internal definitions of “accurate and complete” is inconsistent with federal internal control standards, which require management to use “quality information to achieve agency objectives and design control activities, such as accurate and timely recording of transactions, to achieve objectives and respond to risk.”<sup>23</sup>

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<sup>17</sup> *Supra* Note 13, p.16.

<sup>18</sup> *Supra* Note 13, p. 19.

<sup>19</sup> 16 U.S.C. 1371(a)(5)(D)(iii)

<sup>20</sup> *Supra* Note 13, p. 28.

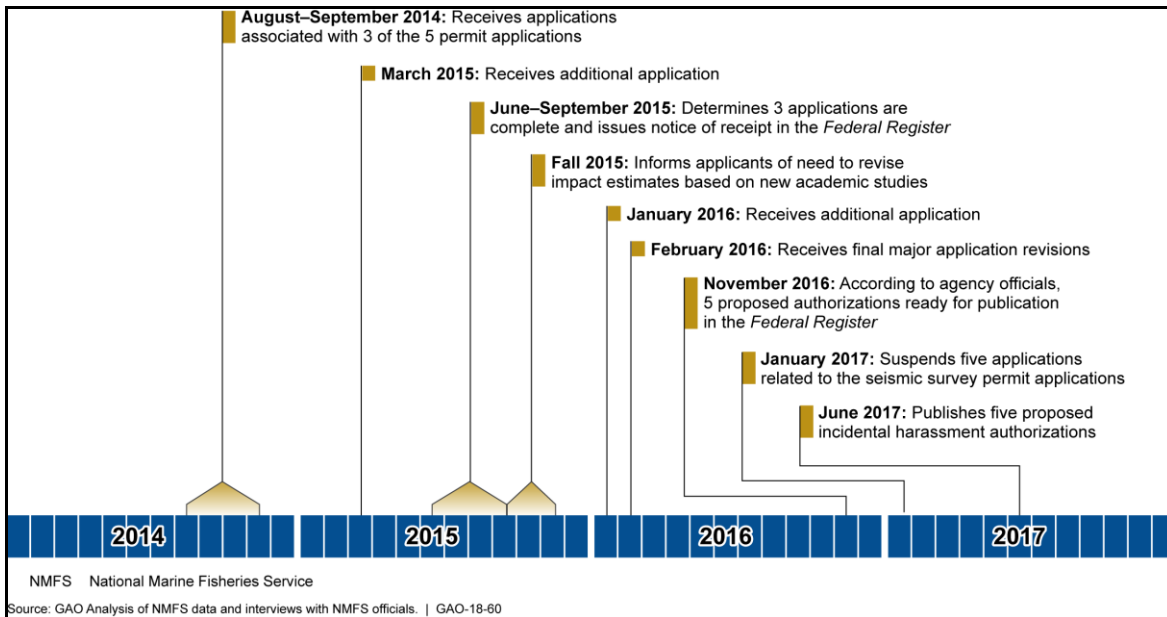
<sup>21</sup> *Id.*

<sup>22</sup> *Supra* Note 13, at GAO Highlights.

<sup>23</sup> GOVERNMENT ACCOUNTABILITY OFFICE, STANDARDS FOR INTERNAL CONTROL IN THE FEDERAL GOVERNMENT, GAO-17-704G (2014).

*Politicization of Seismic Surveying Permits in the Atlantic*

At the present time, six permits for surveying in the Atlantic are pending review with BOEM. These permit applications have a long history, as they were abused for political purposes under the Obama administration. These six G&G applications were submitted to BOEM between March and May of 2014, and all applicants but one applied concurrently for an IHA with NMFS. According to BOEM, these applications were considered accepted and complete by June 2014.<sup>24</sup> BOEM decided to hold a public comment period for these applications, as the Atlantic is still considered a “frontier” area for seismic surveying by the agency. The agency then held the applications as it waited for NMFS to issue the IHAs.



*Figure 3: NMFS Review Timeline of Five IHA Applications for Seismic Surveying in the Atlantic OCS Region*

Then, at the twilight of the Obama administration, BOEM abruptly denied the six applications in January of 2017. At this point, these applications had been under review for **948** to **982** days.<sup>25</sup> According to agency officials, this was the first time they had ever denied a G&G permit. The rejection letters cited several reasons for the denial, including that the Atlantic OCS was not open to leasing under the 2017-2022 National OCS Oil and Gas Leasing plan.<sup>26</sup> This policy decision incorrectly conflated two distinct processes, and failed to understand the value of seismic survey data for a wide range of stakeholders. In May 2017, BOEM decided to reconsider these permit applications and rescinded the denials made by the previous administration.

<sup>24</sup> *Supra* Note 13, p. 32.

<sup>25</sup> *Supra* Note 13, p. 33.

<sup>26</sup> Letter from Michael A. Celata, Regional Director, BOEM Gulf of Mexico Region to Asif Ali, Senior Marine Acquisition Project Manager, TGS (January 6, 2017).

## *A New Approach*

GAO's report corroborated the complaints of industry, researchers, and policymakers, and highlighted the failures, and seemingly intentional delays, in the current permitting process. However, the new administration has made several important steps in improving on processing seismic permits. President Trump issued an Executive Order in April 2017, and called upon the Secretary of the Interior to work with the Secretary of Commerce to "develop and implement... a streamlined permitting approach for privately funded seismic data research and collection aimed at expeditiously determining the offshore energy resource potential."<sup>27</sup> The Executive Order is an important first step to improving management of our nation's resources, and demonstrates this administration's commitment to energy dominance.

Congress has developed legislative solutions as well, identifying the simple, common sense fixes to the inept regulation and statutory guidance governing seismic research. A reorganization of incidental take authorization permitting functions has been proposed, as moving these permitting functions into BOEM would alleviate many of the issues causing permitting delays.

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<sup>27</sup> Exec. Order No. 13795, 82 FR 20815 (2017).