

**Statement of
Margaret S. Howell
Founder
Stop Offshore Drilling in the Atlantic**

**House Committee on Natural Resources
Subcommittee on Energy and Mineral Resources
Hearing on “*Evaluating Federal Offshore Oil and Gas Development on the Outer Continental Shelf*”**



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Chairman Gosar, Ranking Member Lowenthal and Honorable Committee Members:

Good morning. My name is Peg Howell. Thank you for inviting me to testify before the committee today. I look forward to a robust conversation about the impacts that the proposed offshore drilling and seismic testing in the Atlantic will have on coastal economies and the people who live and visit here. I would like to submit my written testimony for the record.

I especially want to thank you for inviting a citizen who lives on the beautiful Atlantic coast. We are the ones who will be most impacted if the Atlantic is opened to offshore exploration and drilling. It is a daunting task to represent the millions of residents, tens of thousands of business owners, and the marine and wild life that grace our coast – all of which will be harmed in some way by offshore drilling, seismic testing, and the onshore infrastructure that supports it.

The opposition to seismic airgun blasting and offshore drilling in the Atlantic is enormous and continues to grow. [Fig.1] We have resolutions and letters opposing seismic testing and drilling from:

- 126 East Coast municipalities
- Over 1,200 local, state and federal elected officials
- An alliance representing over 41,000 businesses and 500,000 fishing families from Florida to Maine
- New England, South and Mid-Atlantic Fishery Management Councils
- Other commercial and recreational fishing interests, such as the Fisheries Survival Fund, Southern Shrimp Alliance, Billfish Foundation and International Game Fish Association
- Numerous chambers of commerce, tourism boards, and homeowners, restaurant and hotel associations from New Jersey to Florida

In addition, NASA, the Department of Defense, and the Florida Defense Support Task Force have also expressed concern with offshore oil and gas development threatening their ability to perform critical activities.

In my own state of South Carolina, *every* mayor in every coastal city and town as well as our Governor oppose seismic testing and drilling. They are Republican *and* Democrat alike; protecting our coast is not a partisan issue.

My comments today are informed by my first-hand experience as an offshore drilling engineer, business owner, educator and especially as a mother who is committed to leaving this world better than I found it - for my son and for generations to come.

I was the first female petroleum engineer to graduate from Marietta College, where I earned my B.S. in Petroleum Engineering, cum laude. I was also the first female “company man” – which is the oilfield’s term for drilling rig supervisor – in the Gulf of Mexico. [Fig.2] I have worked for Chevron, Mobil, and Marathon oil companies in the US and in the North Sea. I later earned an MBA from Harvard Business School and have run my own consulting business for 23 years. My work has been focused on developing leaders, primarily senior executives in Fortune 50 companies.

A little over 8 years ago, my husband and I semi-retired to a piece of heaven on earth called Pawleys Island, South Carolina. Pawleys Island is one of the oldest seaside resorts in the country, established in the early 1700s by plantation owners who came to the beach in the summertime to escape the mosquitoes and the malaria in the rice fields. Pawleys is a place where people deeply love their land, the rivers, the salt marshes and the beaches. We are proud, as one neighbor said, of the “generations of concerned, responsible people, along with county, state and federal governments, that have worked for more than a century to protect hundreds of miles of the Atlantic Coast from abuse, misuse and exploitation. As a result, [our] coast contains some of the most pristine waters, beaches and salt marshes (a vital nursery for sea life) in the world.”¹ We are also proud of the science that is done in those untouched inlets and coastal forests by universities across the state and the country – science that helps us understand the interconnectedness of all life.

In that context, you can imagine my shock and dismay in the fall of 2013 when I started noticing articles and op-eds in our local newspaper written by our County Councilman and State Representative supporting oil and gas exploration in the Atlantic.^{2 3} [Fig. 3, 4] Why would these men put our precious coast and economy at risk?

Those articles set in motion a series of events that culminated in a small group of individuals in Pawleys Island forming an organization called “SODA -Stop Offshore Drilling in the Atlantic” in February 2015. SODA is an all volunteer, non-partisan, grassroots organization formed because of our desire to protect and preserve the health and economy of the Atlantic coast, our home. Our sole mission is to prevent offshore seismic testing and drilling for oil and gas in the Atlantic. We have an extremely dedicated and talented core team that has been meeting at least twice a month since our founding, and are joined by approximately 2,000 active members engaged in educating the citizens and elected officials of South Carolina about offshore issues, and advocating for our coast at the federal, state and local levels.

Since March 2015, we have been researching and sharing with literally thousands of people the facts about why offshore oil and gas drilling and seismic airgun surveys are not good for South Carolina. One of the most important contributions SODA has made to the effort is a study called **Tourism vs. Oil** (TVO), written by three SODA team experts. [Fig.5] This analysis compared the financial tradeoffs of the proposed venture to drill for oil in the Atlantic Ocean off the South Atlantic States with the projected value of South Carolina’s tourism-based economy, based on

the study prepared for the American Petroleum Institute and the National Ocean Industries Association, titled, **The Economic Benefits of Increasing U.S. Access to Offshore Oil and Natural Gas Resources in the Atlantic**, authored by Quest Offshore Resources (the Quest Report). The TVO analysis concludes that the overly optimistic projections for state revenues included in the Quest Report are only 1/27th of the conservative estimates of South Carolina's tourism economy over the same time period. In other words, the TVO analysis shows, in indelibly stark numbers, that it is not in the economic interest of the State of South Carolina or its residents to support drilling in the Atlantic.⁴

Looking at the entire Atlantic coast economy, nearly 1.4 million jobs and over \$95 billion in gross domestic product rely on a healthy coast and ocean ecosystems, mainly through fishing, tourism and recreation. To expose the Atlantic to offshore drilling and seismic testing is, as South Carolina Governor McMaster says, "killing the goose that laid the golden egg."

As you know, offshore oil and gas exploration and development begins with seismic airgun surveys, an extremely loud and dangerous process used to search for potential oil and gas deposits deep below the seafloor. The airgun blasts -- one of the loudest manmade noises in the ocean -- are discharged every 10-12 seconds, 24 hrs/day for months at a time. The noise can be heard more than 2,500 miles from the source, approximately the distance from New York to Las Vegas. Five companies, some of which are internationally based, are currently applying for Incidental Harassment Authorizations (IHAs) from NOAA. [Fig.6] The standard they must meet to obtain the IHA is that the number of takings would:

- be of small numbers,
- have no more than a "negligible impact" on those marine mammal species or stocks, and
- not have an "unmitigable adverse impact" on the availability of the species or stock or "subsistence" uses."

The seismic companies will be running over 90,000 miles of seismic lines across all the Mid- and South Atlantic Planning Areas, roughly 170 million acres. Combined, they will run a total of 906 days of seismic within a one year permit period. This is an unprecedented amount of noise. When comparing this amount of seismic to all the seismic run from 1968 through 1997, there is no other year in any federal OCS area that ran this much seismic.⁵

The five companies collectively have requested over 435,000 individual Level B harassments, and the proposed mitigation only compresses the time frame during which the airgun blasts occur. There is nothing "small" or "negligible" about that impact, given that the airgun sound travels thousands of miles. There is nowhere for the impacted mammals like whales, dolphins and sea turtles to escape the noise, and we know the noise negatively affects mammals' ability to communicate, navigate, feed and mate. For small populations of mammals, such as the fewer than 500 North Atlantic Right Whales, this amount of noise will certainly cause population-level adverse impact.

It is important to note that one of the companies seeking a permit to conduct seismic airgun blasting, CGG, is a French-based company that is relying on selling the data from this permit to avoid bankruptcy. The United States federal government is literally putting the interest of French oil companies over its own coastal economies and residents.⁶

Numerous studies show the detrimental impact seismic airguns have on fisheries and marine mammals, thereby affecting the catch that anglers bring dockside and the revenues generated by associated businesses. A 2014 study conducted off North Carolina's coast by the University of North Carolina Chapel Hill, Duke University and NOAA, found that during seismic surveying the abundance of reef-fish declined by 78 percent. Just last month, a new study published in Nature Ecology and Evolution found that noise from seismic airguns can also kill zooplankton from a distance of almost three-quarters of a mile away, further than previously thought.⁷ Zooplankton is the foundation of our marine food web. The resultant effects of this impact also damage commercial fishing, restaurants and the recreational fishing businesses in our coastal communities. This is why every major commercial fishing association has opposed seismic surveys and offshore drilling.

Some in government are saying, "We should know what's out there. Let's at least run the seismic." But we are now acutely aware of the damage airgun blasts wreak on our marine life – from our largest marine mammals down to the tiniest zooplankton. And it is very important to note that seismic surveys alone do NOT definitively tell us what is out there. Five applications for permits are currently under review to run 2D seismic in the Atlantic. Historically, 2D seismic alone is only successful in finding oil and gas approximately 20-25% of the time. After the requested 2D surveys, seismic companies will be back here asking for permits to run 3D seismic, a second blast of non-stop airgun noise in our ocean. And 3D seismic only increases the odds of finding oil and gas to 40-50% of the time, in true "wildcat" exploration. If seismic surveys were able to definitively find oil and gas, Royal Dutch Shell would not have spent \$7 billion on a dry hole in the Arctic two years ago. In order to find oil and gas, you will not "know what's out there" until you drill.

Some proponents of opening drilling in the Atlantic make the argument that seismic airgun surveys for oil and gas deposits would allow local communities to learn more about what resources might be available. The reality is that, by law, the seismic surveys are proprietary for 25 years and only available to BOEM and to the oil and gas companies which purchase them. The public, local government officials and even Members of Congress would not have access to the survey data. This inability to access information leaves coastal communities without the opportunity to perform substantive cost-benefit analyses for extracting oil and gas reserves off their coasts. Local stakeholders would be left taking on significant risk without being involved in future development decisions.

The dangers of offshore drilling, its associated onshore infrastructure and the transportation of crude oil, liquefied natural gas (LNG) and refined products are well known. The BP Deepwater Horizon catastrophe should inform our decisions about the Atlantic. DWH was an exploratory well in the Gulf of Mexico, located just 41 miles off the coast. That blowout killed 11 men, pumped 210 million gallons of oil into the waters off Louisiana, Mississippi, Alabama and Florida, and contaminated over 1100 miles of coastal marshes and beaches. [Fig.7] It took months to regain well control. The impact of that disaster on fisheries could total \$8.7 billion by 2020, with the loss of 22,000 jobs and 10 million user-days of beach, fishing and boating activity. Leisure-visitor spending in Louisiana alone in 2010 dropped by \$247 million.⁸

While that blowout was extraordinary, at least monthly we hear news of a spill from offshore drilling, transporting, storing or refining oil and natural gas. According to the Bureau of Ocean Energy Management, there were 232 oil spills in the Gulf of Mexico between 1964 and 2012 resulting in a total of 223,332,900 gallons of oil dumped into the Gulf.⁹ In 2016 alone, 497 accidents (damages, injuries and spills) involving offshore oil rigs were reported.^{10 11}

We know from industry reports that oil companies are particularly interested in drilling in deep (>1000 ft.) and ultra-deep (>5000 ft) water depths, along the escarpment of the outer continental shelf.¹² [Fig.8] Deep water exploration is the most dangerous type of drilling. Not only does it require more sophisticated and oftentimes new and untested technology, it is often located farther away from the coast, hence farther away from emergency support services in the case of a blowout. Note that while the Deepwater Horizon was located only 41 miles from shore, it was drilled in a water depth of 5000 ft, which made it much more difficult to cap, ultimately allowing the well to blow out for 87 days while a relief well was drilled. The Atlantic seismic permit applications request survey lines run in over 16,000 ft of water. The deepest water depth a well has been drilled to date is 11,156 ft.¹³ This raises another concern that oil companies may want to explore for the first time at record water depths.

Every United States coast where offshore oil and gas is produced and transported has suffered multiple massive spills and billions of dollars in damages – most notably oil spills off the Santa Barbara coast, the Exxon Valdez, near-daily spills in Galveston Bay, and spills and ongoing leaks caused by hurricane damage to hundreds of offshore platforms and thousands of miles of pipelines in the Gulf of Mexico. [Fig.9] The Atlantic coast will be no different.

Those of us who live near or visit the Atlantic wonder, “Why would anyone want to put at risk this ocean, our jobs, our property, our favorite vacation spots and our way of life?” Opening the Atlantic to seismic testing and drilling jeopardizes our coastal businesses, fishing communities, tourism and our national defense. It opens the door to even greater risks from offshore oil and gas production down the road. Do we need to drill in the Atlantic to be “energy independent,” or as Interior Secretary Zinke likes to say, “energy dominant?” The answer is “no.” Because of the “shale revolution,” the U.S. is already the world’s leader in oil and gas production. The United States has been first in the world in natural gas production since 2009, when American output surpassed Russia. U.S. production of petroleum hydrocarbons exceeded that of Saudi Arabia in 2013.¹⁴ [Fig. 10]

So why is there is a desire to drill in the Atlantic?

In my work with CEOs across many industries, I have seen how the constant need to increase stock price drives a lot of bad decisions. Wall Street’s need to see increasing growth and ever higher returns pushes companies to only think of consistently delivering the bottom line. In an extraction industry like oil and gas, where the resource is finite, non-renewable and depleting, you have to continuously find new oil and gas reserves to ‘feed the beast’ and seek new markets around the world to export those newly developed quantities of oil and gas.

Oil companies want to drill in the Atlantic to be able to export even more U.S. oil and gas overseas. Since December 2015, when Congress allowed oil companies to export our crude oil

for the first time since the Arab oil embargoes of the 1970s, we have been steadily increasing our crude exports and are now sending more than a million barrels a day to countries like China.¹⁵ [Fig.11 and 12] We are also now exporting over 187 billion cubic feet of liquefied natural gas (LNG) a year.^{16 17 18} [Fig.13] In addition, Congress and the Administration have proposed selling off half of our Strategic Petroleum Reserve because, according to OMB Director Mulvaney, “We think it’s the responsible thing to do.” Mr. Mulvaney told the press, “I don’t need to take this much of your money to bury it in the ground out in West Texas someplace for domestic security and national security reasons when we have domestic supplies like we do.”¹⁹

If the Administration believes that our energy supply is secure enough to sell off 50% of our strategic reserve, then why would it risk the \$95 billion in annual GDP from the Atlantic region and instead take on the significant economic, health and environmental risks associated with exploration and development of the Atlantic?

While oil companies’ stock prices may benefit from these export sales, US consumers lose. When demand (domestic plus export) exceeds supply, prices go up. According to the Energy Information Agency (EIA)’s latest Short-Term Energy Outlook (STEO), “New natural gas export capabilities and growing domestic natural gas consumption contribute to the natural gas spot price rising from an average of \$3.16/MMBtu in 2017 to \$3.41/MMBtu in 2018.”²⁰

The Atlantic coast developed differently than the Gulf coast. Offshore oil and gas has been part of the Gulf’s economy since the 1930s. The offshore waters and marshlands of south Louisiana were carved by canals dug through them to position rigs and gather production. “Going to the beach” means something very different in south Louisiana than it does along the mid and south Atlantic. To now bring to the Atlantic region the onshore infrastructure, pipelines, vessel traffic and pollution that accompanies offshore drilling guarantees destruction of the beautiful beaches, healthy marshes and rivers – as well as the economy – of our coast.

Our health and quality of life are also at risk. Onshore infrastructure, including oil and gas storage, refineries and gas liquefaction plants, and the diesel and chemicals stored there for use in drilling, are a necessary part of the drilling and production support bases. Bases like Port Fourchon, Louisiana are pollution threats to water and air quality, especially when hurricanes strike. [Fig.14] This type of infrastructure and the petrochemical industry that frequently locates nearby is not only incompatible with our tourism and recreation-based economies; it is also inconsistent with the healthful environment people seek when they move here.

We must also consider the impact of the oil and gas industry on our children. The Annie E. Casey Foundation has published the “Kids Count Data Book” for nearly three decades which tracks the well-being of the nation’s children, state by state, using a comprehensive index, including indicators across four domains: Economic Well-Being, Education, Health, and Family & Community. The overall ranking of the four Gulf states were some of the lowest in the nation (TX 41st, AL 44th, LA 48th, and MS 50th). The overall ranking of the mid and south Atlantic states were higher (VA 10th, MD 16th, NC 33rd, SC 39th, FL 40th, GA 42nd).²¹ [Fig.15] While this doesn’t prove that states that don’t have oil and gas industry revenues have better child well-being, it certainly raises the question: why do states that are heavily dependent on oil and gas revenues rank so low?

Some people who live here, including many of our government officials, were initially under the impression that because you can't see the rigs from the beaches (assuming the 50 mile buffer will be included in the new proposed plan), that there will be no harm to our coast. They think that somehow the rigs just come, drill, and then go away, without considering the deleterious effect of oil and gas production on the local economy and environment.

We have found it helpful to share with them the history of Southern California's experience with the oil and gas industry:

In California, the first Federal OCS lease sale was held in 1963. Six years later the first Santa Barbara spill occurred which caused such an uproar against drilling that the US Secretary of the Interior removed federal tracts near Santa Barbara from oil and gas leasing. However, the federal government quickly resumed offshore leasing and continued to hold sales through 1982, when the US Congress directed that no federal funds be used to lease additional federal tracts off the coast of California. No federal lease sales have been proposed for offshore California since then - - until President Trump's Executive Order was signed this April which will require California to once again be considered.

During this same time, the California State Lands Commission, which owns and controls the mineral resources within 3 nautical miles of the coast, had not permitted leasing of state offshore tracts since the Santa Barbara oil spill in 1969.

In 1996, Chevron removed four of its oil and gas platforms off the Santa Barbara and Ventura coast which led to federal plans for the decommissioning of the remaining offshore California structures. At that time, there were a total of 27 oil and gas platforms and approximately 200 miles of associated pipelines located off the coast of southern California. All of this oil infrastructure was installed as a result of the initial lease sales, but remained even after the 1982 ban on further lease sales.

A second large Santa Barbara oil spill happened just before Memorial Day weekend 2015, when an underground pipeline that transports oil from an offshore platform to refineries ruptured, spilling 142,000 gallons of crude oil into a coastal state park. The spill, caused by corrosion in a pipeline that did not have automatic shutoff valves, closed nearby beaches for two months, killed hundreds of animals, including birds, sea lions, and dolphins, and cost \$96 million to clean up.

By law, as long as federal OCS wells are producing commercial quantities of petroleum, oil companies may continue to produce from those leases, drill more wells, or sell the property to another operator. In the California OCS waters, oil companies have produced from some of these OCS leases for over 50 years – more than 40 years after the Santa Barbara spill.^{22 23}

Despite the long-term bans on new leasing in California state waters (since 1969) and federal waters (since 1982), drilling and production have continued on these leases. The point of reviewing this history is to educate Atlantic coast residents and elected officials that when the oil business comes to town, it is very slow to leave, if ever.

Some of the same people who thought the rigs would just come, drill, and then go away, have also heard that drilling technology has improved, and it's safer since the Deepwater Horizon disaster. Although the Department of the Interior adopted many of the safety recommendations from the National Commission on the BP Deepwater Horizon Oil Spill, President Trump's April 28 executive order on offshore energy threatens to abolish these safety improvements. Bob Graham, a former Florida governor and United States senator, and William K. Reilly, a former administrator of the Environmental Protection Agency, were co-chairmen of the commission. They, along with the other commission members are unanimous in their view that the actions proposed in the president's executive order are unwise.²⁴

"I don't have any doubt it's safer than before, but you can't eliminate risks in operations like this," says Michael Bromwich, who led the Interior Department's newly created agency to regulate the industry after the Gulf spill. "Anytime you go deeper, the technological risks increase." Deepwater drilling still relies on the same underlying technology and a skilled workforce, says Paul Bommer, who holds the Chevron lectureship in petroleum engineering at the University of Texas at Austin. "It's still a people business," Bommer says.²⁵

And people make mistakes.

As an engineer, I was taught to identify the problem and solve it. While earning an MBA, my problem-solving and decision making horizon expanded. I learned that effective leaders consider both the short term and long term aspects of a problem. While Wall St. demands short term results, responsible leadership requires making decisions that are consistent with our values and goals as a society.

Whether or not to drill in the Atlantic is a leadership challenge which requires considering all the issues, then thinking about our values and the impact on our children and their futures. If the Atlantic is opened to offshore drilling and seismic testing, will Winyah Bay near my home still host those beautiful redfish? Will North Inlet's salt marshes still be a pristine nursery for crabs, shrimp and oysters? Will the snowy egrets and blue herons still vie for the best places to roost while keeping an eye on the alligators at Huntington Beach State Park? Will my son's children and their children still remember the beautiful beach where Grandma and Grandpa took them to look for sea turtle tracks in the morning and watch for dolphins on the horizon at day's end?

I don't expect that I - or most of you for that matter - will still be here in 40 years when we will know the consequences of these decisions about seismic blasting and drilling in the Atlantic. I want to believe that that the Atlantic Ocean and our coast will still be as magnificent as they are today and future generations will be inspired by our legacy, because this is a FOREVER decision.

I look forward to answering any questions you may have today. Thank you.

APPENDIX

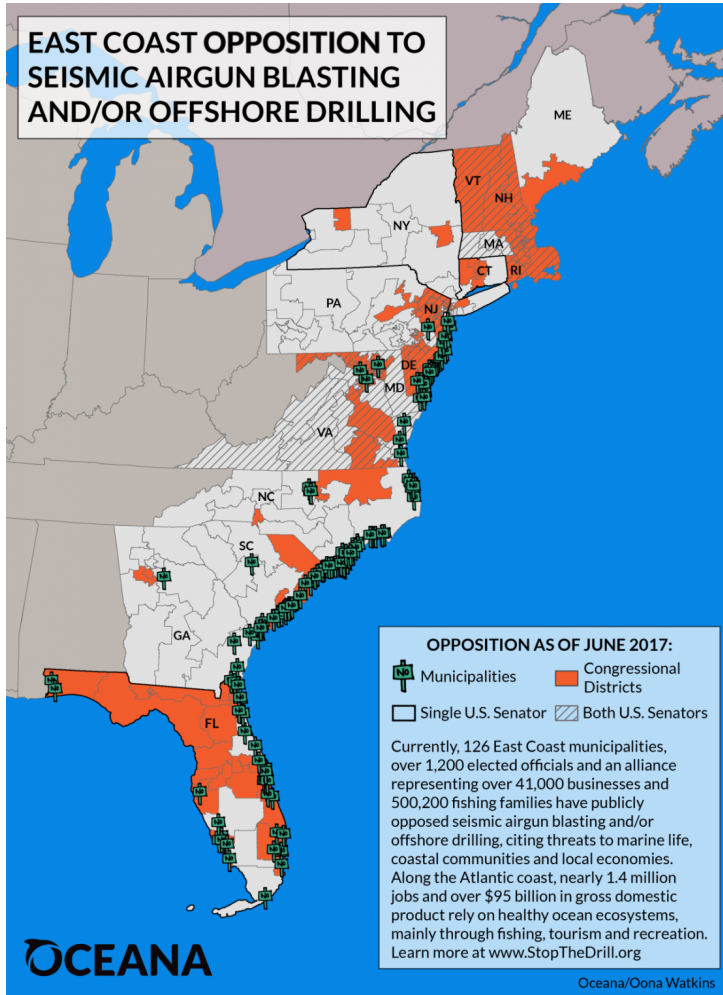


Figure 1. Growing East Coast Opposition to Seismic Airgun Surveys and Offshore Drilling



Figure 2. Peg Howell, "Company Man" on her first rig

Offshore drilling

An opportunity for economic growth

By BOB ANDERSON

I recently had the pleasure of attending an offshore energy conference to learn about the exploration and extraction of natural gas and oil from our Outer Continental Shelf. The Continental Shelf is the area from the shoreline out to the edge of the slope that falls into the deep ocean, a distance of about 60 miles off of our coastline. The water depth on the shelf reaches about 100 feet. Evidently, based on past experience and ocean floor research, the most likely place to find oil and natural gas deposits is along the foot of the slope in deep water. The area of the OCS is slightly smaller than the onshore area of our state or about 19.3 million acres.

So what does this have to do with Georgetown County? The short answer is that with our natural port being the only centrally located port along our South Carolina coastline, other than Charleston which is concentrating on major import/export shipping, we are the logical place to be the center for exploration and extraction of natural gas and crude oil. Due to limitations on the length of this article, I cannot get into much detail, but over the coming months, we plan on sharing much more information about potential economic impact on our county and where we are in the process of production.

I do want to point out a few of the interesting and informative topics that were discussed. You should know that a recent survey determined that 77 percent of South Carolina voters are in favor of offshore drilling. As for a time line, we are currently at the end (December 2013) of an environmental impact study being done by the Department of the Interior. If that goes well, Interior will allow seismic surveys to be conducted on the OCS. The last surveys were done 30 years

ago, and with the advances in survey technology, it is expected that we will discover many more areas of interest. In the past, three in 10 exploration wells were successful, but with current two- and three-dimensional seismic survey techniques, the success ratio has jumped to seven in 10 saving millions of dollars.

Once the survey phase is complete, the drilling and extraction phase can begin. The leasing program by the Department of the Interior for the South Atlantic Region and the revenue sharing and leasing legislation by Congress for drilling will take place from 2017 through 2022. We can expect as many as 5,000 new jobs during the construction phase. I was also made aware of efforts by folks at the University of South Carolina to establish a new earth and ocean sciences laboratory. What better place than Georgetown County, given our natural port for easy access to the OCS and our existing campuses: Horry-Georgetown Tech and Coastal Carolina.

Something else that I found interesting is the fact that crude oil and natural gas are renewable resources. They are organic compounds made up of carbon, hydrogen and oxygen. The temperatures and pressures found on the ocean floor provide an environment which transforms these elements into the hydrocarbons known as natural gas and crude oil. These compounds are being released naturally into our environment every day.

Speaking of the environment, I need to share a few things that I learned on that subject. Will we see the drill rigs when they are actually in the drilling phase? An 80-foot-high platform would have to be within 15 miles of the coast before you could see it with binoculars because of the over-the-horizon/line-of-sight phenomenon, and as I men-

tioned earlier, the probable places of interest will be at the slope 60 miles offshore.

What about accident risk mitigation? Since the Deepwater Horizon accident, the oil and gas industry has made significant progress in the area of safety and environmentally-responsible operations. I will get into the details of that in another article, but as a technical guy, I was very impressed with the technological innovations that are currently available and what is being developed. Seabed production facilities and pipelines to carry product to shore or inland terminals will be a reality when the first wells are drilled. This means that there will be no structures on the surface once the well is drilled.

As I have explained, this will not happen over night, and there will be bridges to cross at the federal level before this can come to fruition, but I am very excited about what this can mean to our county. This undertaking will require a new workforce ranging from Ph.Ds in science and engineering to deck hands on the support vessels working the rigs.

Making this happen will not be easy. There is and will be a strong lobby by the hardcore environmentalists to defeat our efforts to make this happen at the federal, state and local level. If you believe that drilling along the coast of South Carolina is good for the country, state and Georgetown County, you had better be prepared to get personally involved and assist all of our politicians. We will have to fight at every crossing for energy independence and a flourishing local economy. The opposition will be organized, well funded and as passionate as we are.

■
The writer represents County Council District 6.

Figure 3. Coastal Observer Op-Ed Oct. 2013

6 COASTAL OBSERVER
Thursday, October 30, 2014

House District 108 | Questions for Stephen Goldfinch

Environment: *How can the state balance the environment and economic development in offshore oil and gas exploration?*

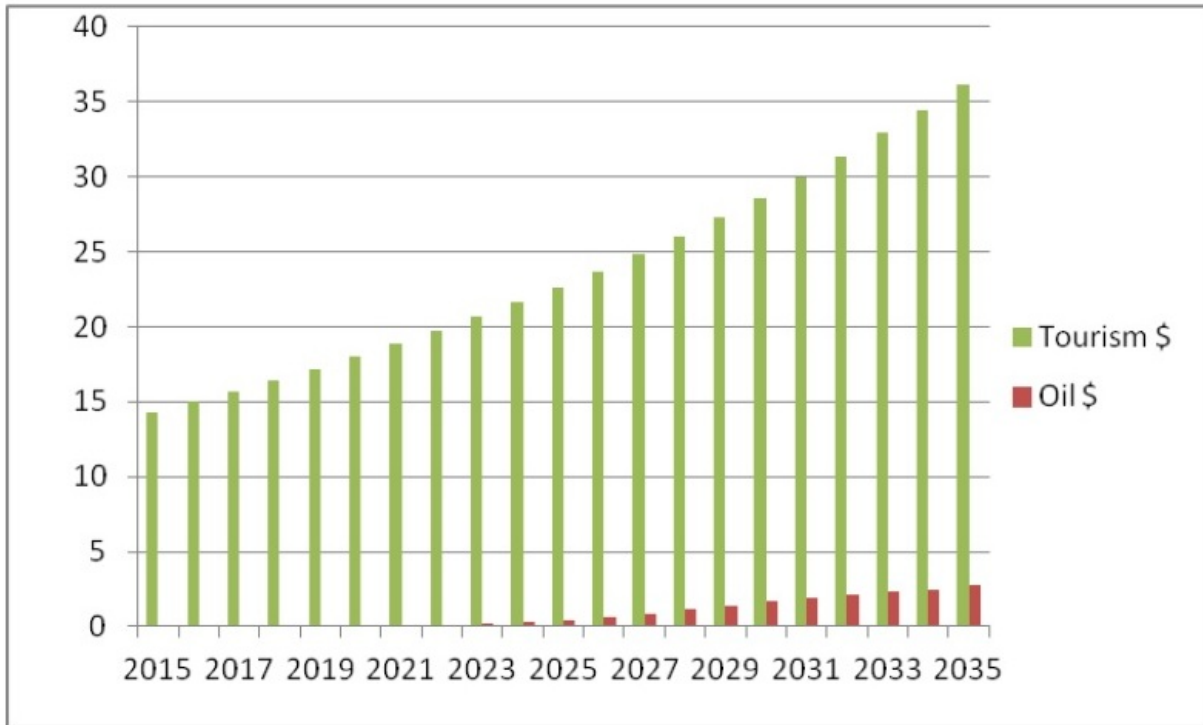
Goldfinch: All the geologists say every bit of the natural resources we have — there appears to be no oil; it's all natural gas — is 60 miles offshore. I don't care what high-rise you get in, you are not going to see it 60 miles offshore. It's not going to jeopardize tourism.

I will say this: I would not support it if it was within eyesight of the shore. We have a tremendous tourism economy here. We can't do anything to jeopardize it. If they need to put it 15 miles offshore or further, that's what they have to do if they want to come to South Carolina. We've got a main gas line that terminates at the Georgetown port. That's a tremendous opportunity.

The federal government has permitted us for seismic testing. If they find what they think is offshore, Georgetown is the perfect port for operations. I visited Louisiana and saw a working well. Shrimpers were happy. Clammers were happy. We fished all around oil and gas rigs. I didn't see any problems out there. This whole idea that seismic testing is going to kill all the dolphins: I saw dolphins swimming around the boat doing seismic testing in Louisiana.

Figure 4. Coastal Observer Oct. 30, 2014

Would you risk South Carolina's tourism industry for a few barrels of oil?



Projected Contributions to South Carolina's statewide economy from Oil Drilling vs. Tourism revenues in Horry, Georgetown, Charleston & Beaufort counties for each year from 2015 – 2035 in Billions of Dollars.

Sources; (a) Projected Contributions to SC from Oil are taken from Table 23 in Quest Report to American Petroleum Institute, Dec 2013. (b) Tourism revenues are taken from a detailed report on the economics of Offshore Drilling vs. Tourism (available at www.drilldownsc.com/#!tvo/c1sav). Tourism revenues were calculated using data from SC Department of Parks, Recreations and Tourism, and from Myrtle Beach Area Chamber of Commerce.

Figure 5. Tourism vs. Oil (TVO) Report

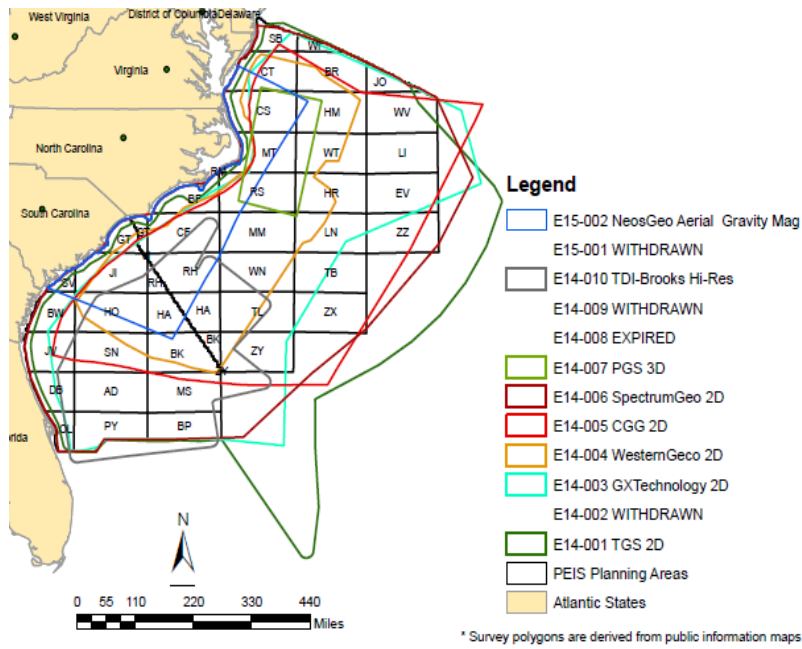


Figure 6. Five 2D seismic permit applications

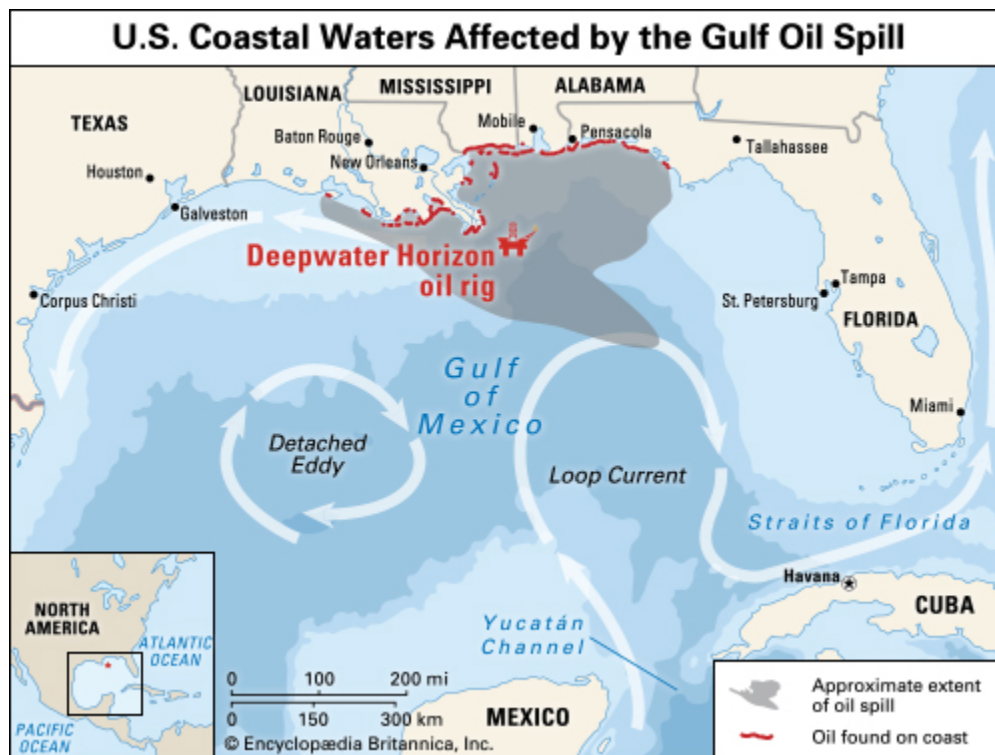


Figure 7. Coastal impact of Deepwater Horizon disaster

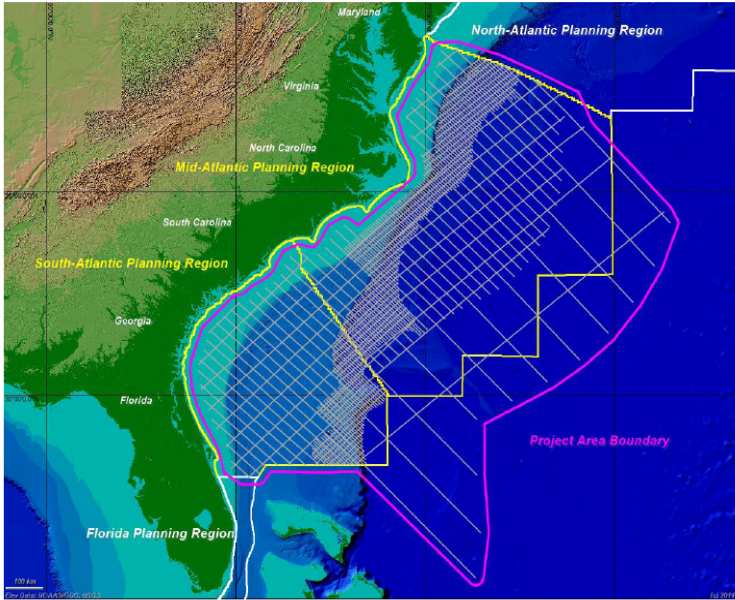


Figure 8. Atlantic bathymetry showing escarpment. Yellow lines = BOEM planning areas. Hatched lines indicate just one proposed seismic survey.

Every United States coast...

where offshore drilling has taken place has suffered multiple massive spills and billions of dollars in damages

The Atlantic coast would be no different



Exxon Valdez
11 million gallons
March 1989



Deepwater Horizon
210 million gallons
April 2010



Santa Barbara
3 million gallons
January 1969



Santa Barbara pipeline break oil on 9 miles of beach
May 2015



Galveston Bay oil spills are routine -- averages 285 spills a year.



Oil Rig Explosion
Kills 4 in Gulf of Mexico
April 2015



Taylor Platform
Destroyed by Ivan
Leaking oil since 2004



Hurricane Katrina
9 million gallons oil
100 rigs destroyed
450 pipeline breaks
August 2005

Figure 9. Every U.S. coast has been damaged – except the Atlantic

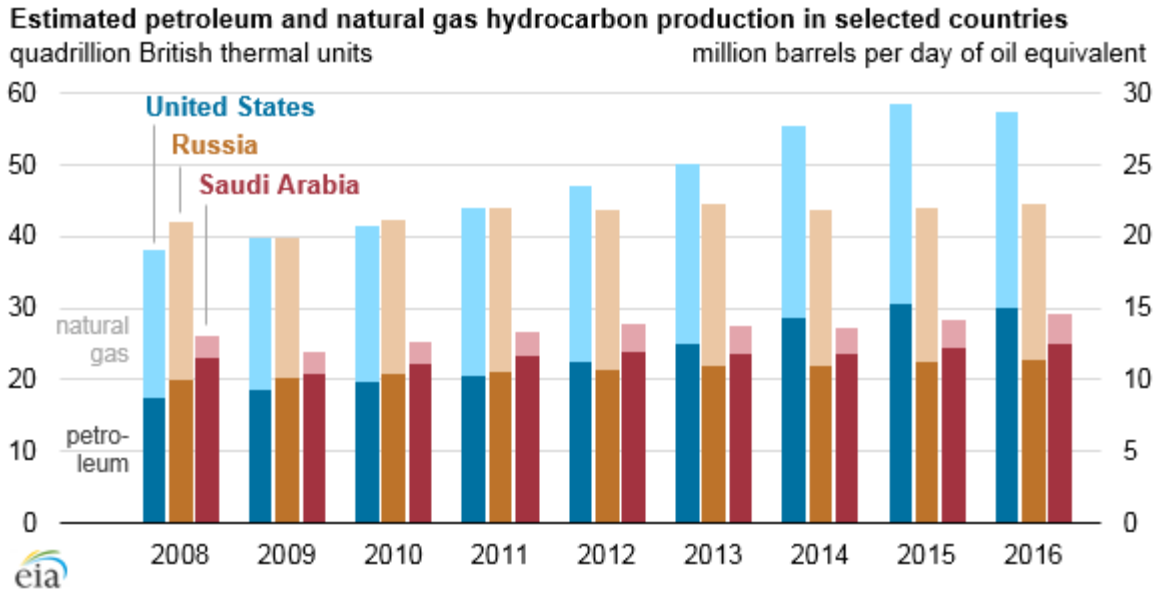
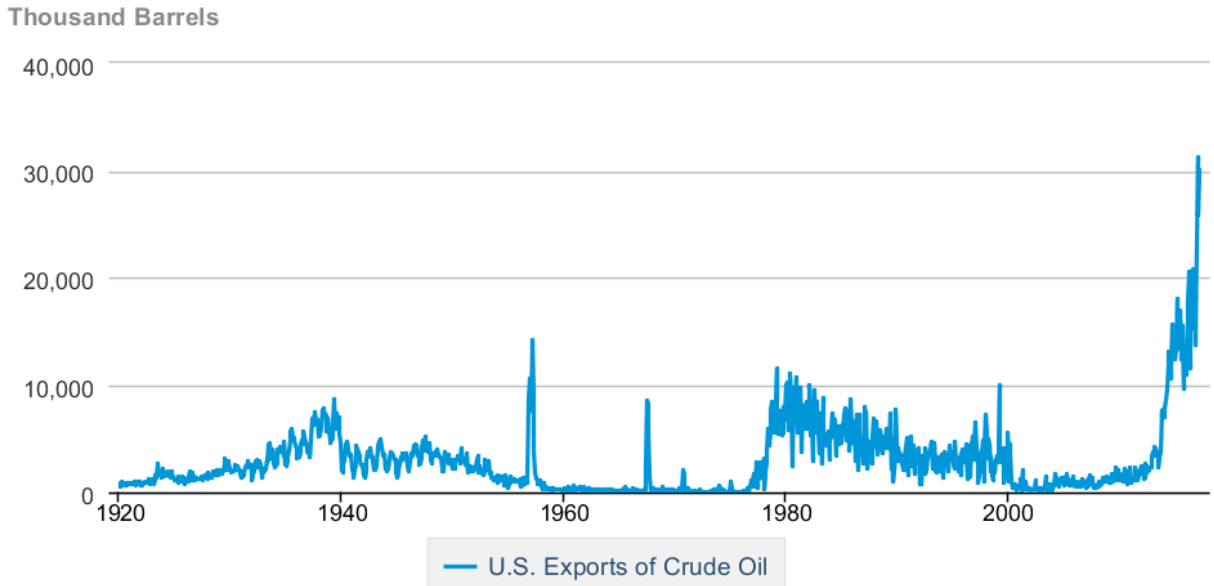


Figure 10. U.S. Energy Dominance

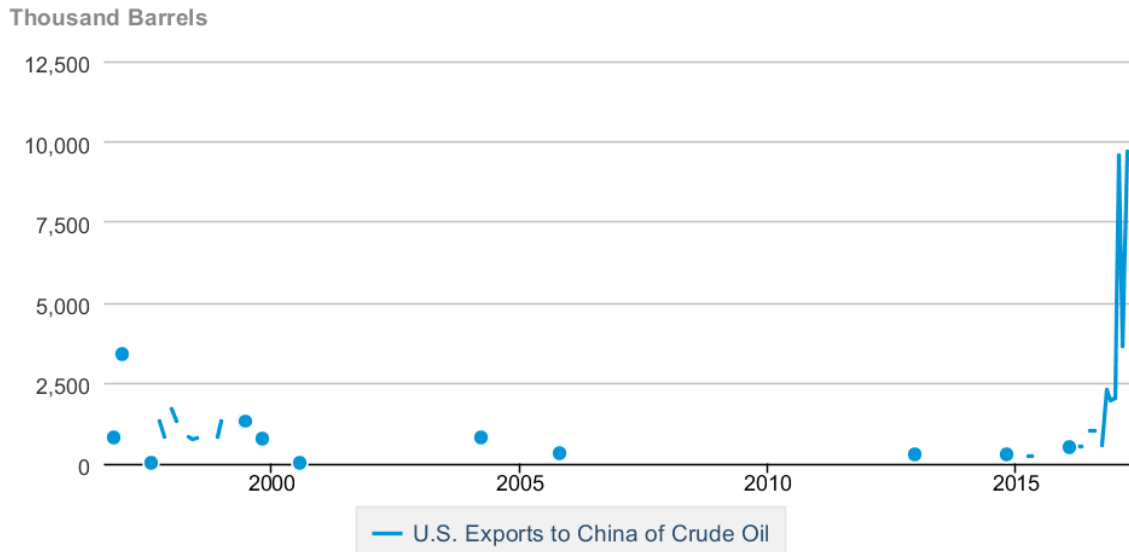
U.S. Exports of Crude Oil



Source: U.S. Energy Information Administration

Figure 11. Crude Oil exports increase since Dec. 2015

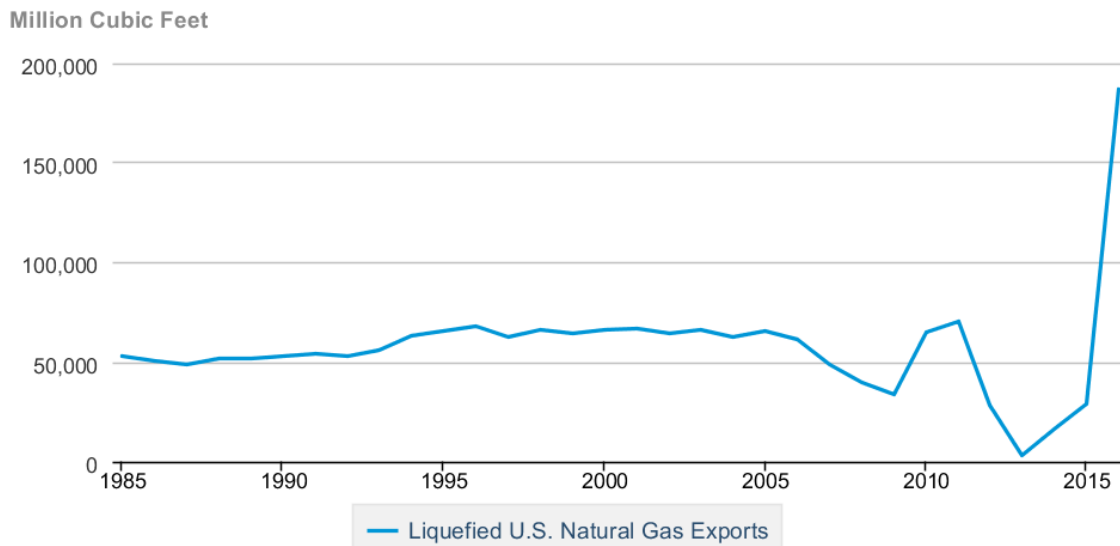
U.S. Exports to China of Crude Oil



 Source: U.S. Energy Information Administration

Figure 12. US Crude Oil Exports to China

Liquefied U.S. Natural Gas Exports



 Source: U.S. Energy Information Administration

Figure 13. US LNG Exports



Figure 14. Port Fourchon, Louisiana - the impact of offshore infrastructure

The 2017 KIDS COUNT Data Book's overall score for Gulf and Mid- and South Atlantic states

State	Overall Rank Of the 50 US states	Economic Well-Being Rank	Education Rank	Health Rank	Family and Community Rank
Virginia	10	12	7	16	13
Maryland	16	15	12	30	20
Delaware	23	29	23	14	26
North Carolina	33	37	22	31	36
South Carolina	39	33	37	34	37
Florida	40	45	31	44	35
Texas	41	32	30	39	47
Georgia	42	44	34	38	41
Alabama	44	38	42	42	43
Louisiana	48	49	47	49	48
Mississippi	50	50	48	48	50

Figure 15. Gulf of Mexico oil & gas- producing states are some of the lowest ranked for Child Well-Being by State, Annie E. Casey Foundation, 2017.



The Atlantic from North Litchfield Beach, South Carolina.

Photo credit: John W. Thomas

ENDNOTES

¹http://www.postandcourier.com/opinion/letters_to_editor/letter-seismic-testing/article_afba5e44-5299-11e7-a1a5-4be4ae320b7d.html?utm_medium=social&utm_source=facebook&utm_campaign=user-share

² Coastal Observer, “House District 108: Questions for Stephen Goldfinch,” October 30, 2014

³ Coastal Observer, “Offshore Drilling, An Opportunity for Economic Growth” by Bob Anderson, former Georgetown County Councilmember, District 6, October 24, 2013

⁴ <http://www.drilldownsc.com/#!/tvo/c1sav>

⁵ Geological & Geophysical Data Acquisition, Outer Continental Shelf Through 1997, George Dellagiarino, Patricia Fulton, Keith Meekins and David Zinzer, US DOI MMS, OCS Statistical Report MMS 98-0027

⁶ <https://www.reuters.com/article/france-cgg-idUSL8N1JB6H8>

⁷ <https://www.nature.com/articles/s41559-017-0195>

⁸ http://usa.oceana.org/sites/default/files/deepwater_horizon_anniversary_report_updated_4-28.pdf

⁹ <https://www.bsee.gov/sites/bsee.gov/files/reports/incident-and-investigations/spills-greater-than-50-barrels1964-2012-as-of-august-3-2012.pdf>

¹⁰ https://www.doi.gov/sites/doi.gov/files/migrated/budget/appropriations/2016/upload/FY2016_NRDA_Greenbook.pdf

¹¹ <https://www.fastcompany.com/40406093/how-satellite-data-caught-gulf-oil-companies-hiding-enormous-oil-spills>

¹² The Economic Benefits of Increasing U.S. Access to Offshore Oil and Natural Gas Resources in the Atlantic, authored by Quest Offshore Resources, December 2013

¹³ <http://gcpatrain.com/maersk-venturer-begins-drilling-worlds-deepest-well/>

¹⁴ <https://www.oilandgas360.com/despite-oil-downturn-u-s-ranks-no-1/>

¹⁵ <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCREXUS1&f=M>

¹⁶ https://www.eia.gov/dnav/pet/pet_move_expc_dc_NUS-Z00_mdbl_m.htm

¹⁷ <https://www.oilandgas360.com/despite-oil-downturn-u-s-ranks-no-1/>

¹⁸ <https://www.eia.gov/todayinenergy/detail.php?id=31532>

¹⁹ http://thehill.com/policy/energy-environment/334811-budgets-oil-provisions-divide-congress-white-house?utm_source=&utm_medium=email&utm_campaign=8890

²⁰ <https://www.eia.gov/outlooks/steo/report/natgas.cfm>

²¹ <http://www.aecf.org/resources/2017-kids-count-data-book/?gclid=CPzat7Wm-tQCFc1LDQoduaQGcw>

²² <http://www.ogj.com/articles/2017/06/boem-to-identify-california-offshore-platform-decommissioning-issues.html>

²³ <http://www.mercurynews.com/2017/04/17/first-california-offshore-oil-platform-to-be-removed-in-20-years/>

²⁴ <https://www.nytimes.com/2017/07/05/opinion/trump-oil-drilling-energy-gulf.html?smid=fb-share>

²⁵ <http://news.nationalgeographic.com/2015/04/150420-bp-gulf-oil-spill-safety-five-years-later/>