



STOP OFFSHORE DRILLING IN THE ATLANTIC
PO BOX 1743, PAWLEYS ISLAND, SC 29585

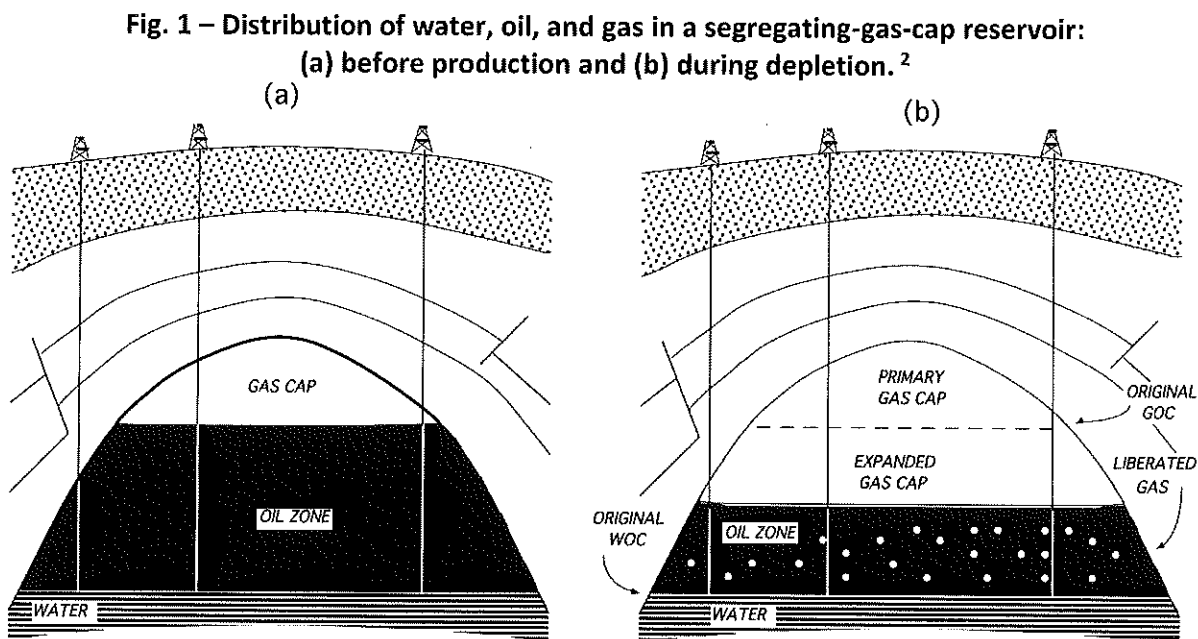
Debunking False Claims:
“We will just explore for and produce natural gas.
It’s clean and environmentally friendly.”

Author: Peg Howell
Date: February 20, 2018

It isn’t possible to explore *ONLY* for natural gas. When exploration wells are drilled, there are only two possible outcomes. You either find some combination of oil, natural gas and/or water - or you find nothing (a “dry hole”).

When oil and gas are discovered together in a reservoir, *by law*,¹ the oil is produced *before* the natural gas in order to maximize ultimate recovery. This is because when oil and gas occur together in a reservoir, as the oil is produced, the pressure in the reservoir decreases and the gas cap expands, which helps remove the oil (essentially pushing it out of the pore spaces in the rocks), thereby maximizing the recovery.

This illustration may help:



“In some instances, oil reservoirs are discovered with a segregated gas zone overlying an oil column.... If properly harnessed, gas caps can enhance oil recovery considerably.... Producing wells usually are completed only in the oil leg to minimize gas production...”

"...Gas caps act to mitigate the pressure decline [which occurs when oil is removed from the reservoir], extend the life of the reservoir, and ultimately improve the oil recovery."³

Even oil and gas industry associations explain that you cannot explore *only* for gas:

"...the American Petroleum Institute (API)... says ...it is impossible to predict with certainty what types of resources [gas or oil] will be in an area.

"...the Domestic Petroleum Council and the Independent Petroleum Association of America ...say "... it is not always clear prior to drilling whether a field will yield natural gas, oil, or both...."⁴

The notion that drilling for and producing natural gas is "environmentally friendly" is also wrong.

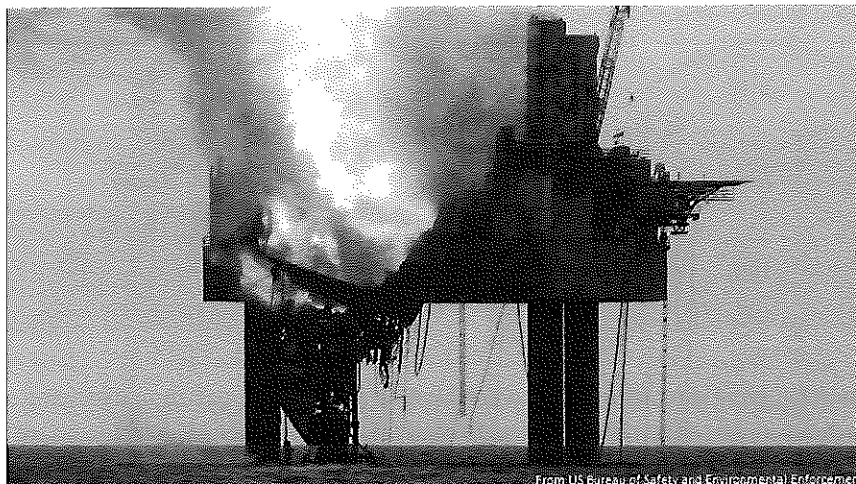
"The drilling and extraction of natural gas from wells and its transportation in pipelines results in the leakage of methane, a primary component of natural gas that is 34 times stronger than CO₂ at trapping heat over a 100-year period and 86 times stronger over 20 years."⁵

Drilling accidents (blowouts) also release natural gas which causes significant air and water quality damage:

"An important anthropogenic source of gas hydrocarbons in the water environment is offshore drilling accidents. Their environmental consequences can be very hazardous. Especially dramatic situations developed in the Sea of Asov as a result of two large accidents on drilling rigs in the summer-autumn of 1982 and 1985. These accidents caused long-term releases of large amounts of natural gas into the water accompanied by self-inflaming of the gas. During these events, the levels of methane in surface waters exceeded the background concentrations up to 10-100 times. The air samples also showed very high concentrations of methane. These accidents drastically disturbed the composition and biomass of the water fauna and caused mass mortality of many organisms, including fish and benthic mollusks."⁶

A more recent natural gas blowout in the Gulf of Mexico happened in 2013:

"Walter Oil & Gas Corp. was completing a well on South Timbalier Block 220 using a Hercules Offshore Inc. jack up rig at 8:40 a.m. on July 23, 2013, when a kick escalated into a blowout. High-pressure gas flowed through the blowout preventer (BOP), which was unable to contain the influx, and 44 people, some with minor injuries, were evacuated about 2 hours later. **The gas ignited and burned for 2 more days** before natural accumulation of sediment inside the well stopped the fire by cutting off its fuel, the US Department of the Interior agency's report said."⁷

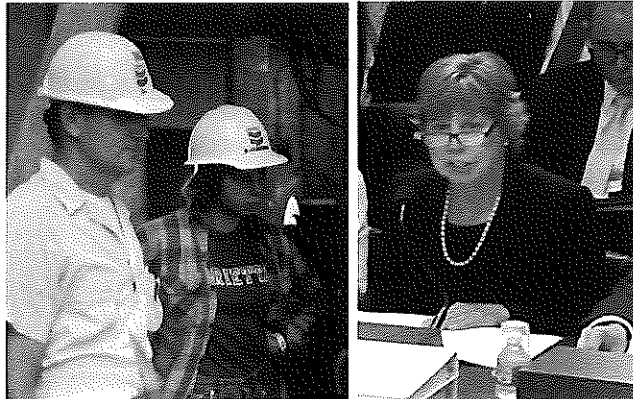


From US Bureau of Safety and Environmental Enforcement

Don't be misled by disingenuous claims by oil industry proponents who say "We will just explore for and produce natural gas. It's clean and environmentally friendly." *It just isn't so.*

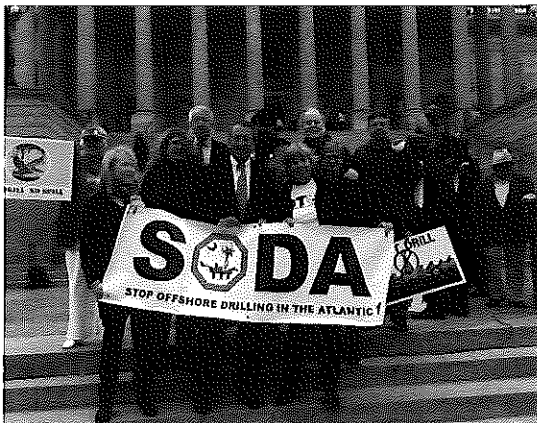
For more fact- and science-based information about this and other issues related to the proposed seismic airgun surveys and drilling for oil and gas in the Atlantic, **contact SODA – Stop Offshore Drilling in the Atlantic** at soda.sc.2017@gmail.com and **follow us on Facebook.**

ABOUT THE AUTHOR



Peg Howell was the first female petroleum engineer to graduate from Marietta College, where she earned her B.S. in Petroleum Engineering, cum laude. She was also the first female "company man" –the oilfield's term for drilling rig supervisor – in the Gulf of Mexico. Peg worked for Chevron, Mobil, and Marathon oil companies in the U.S. and the North Sea. She later earned an MBA from Harvard Business School and has run her own consulting business for 24 years, focused on developing leaders, primarily senior executives in Fortune 100 companies. Peg and her husband, Georgetown County Councilman, John Thomas, live in Pawleys Island, SC.

ABOUT SODA



SODA – Stop Offshore Drilling in the Atlantic -- was formed in February 2015 as an all-volunteer, non-partisan, self-funded, grassroots effort of citizens along the South Carolina coast who share a mission to STOP seismic airgun surveys and offshore drilling in the South Atlantic. SODA is not an environmental group; our sole focus is this one issue.

Our purpose is to provide the facts about the potentially disastrous impact seismic airgun surveys, offshore drilling and its accompanying onshore industrialization will have on our coastal and state economy, health, property, and way of life.

We have presented the facts about the Federal seismic and leasing processes to thousands of citizens and elected officials via small- and large-scale meetings and events from DC to Columbia to Atlanta, and all along the South Atlantic coast.

Our testimony to the U.S. 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," July 12, 2017, is located here: <http://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=106227>.

A video of our testimony to the **South Carolina House Ad Hoc Committee on Drilling**, October 26, 2017, is available here: <https://www.facebook.com/StopOffshoreDrillingintheAtlantic/videos/2105994279636973/>

ENDNOTES

¹ See relevant regulations in these links:

<https://www.gpo.gov/fdsys/pkg/CFR-2013-title30-vol2/pdf/CFR-2013-title30-vol2-sec250-1150.pdf>

§ 250.1150 What are the general reservoir production requirements?

You must produce wells and reservoirs at rates that provide for economic development while **maximizing ultimate recovery** and without adversely affecting correlative rights.

<https://www.gpo.gov/fdsys/pkg/CFR-2013-title30-vol2/pdf/CFR-2013-title30-vol2-sec250-1157.pdf>

§ 250.1157 How do I receive approval to produce gas-cap gas from an oil reservoir with an associated gas cap?

(a) You must request and receive approval from the Regional Supervisor:

(1) Before producing gas-cap gas from each completion in an oil reservoir that is known to have an associated gas cap.

(2) To continue production from a well if the oil reservoir is not initially known to have an associated gas cap, but the oil well begins to show characteristics of a gas well.

(b) For either request, you must submit the service fee listed in §250.125, according to the instructions in § 250.126, and the supporting information, as listed in the table in §250.1167, with your request.

(c) The Regional Supervisor will determine whether your request **maximizes ultimate recovery**.

² http://petrowiki.org/Gas_cap_drive_reservoirs

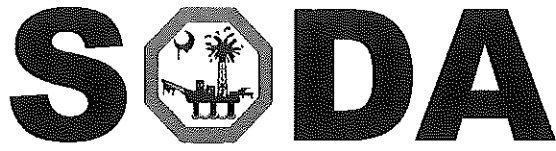
³ Ibid.

⁴ <https://www.maritime-executive.com/article/2005-10-20gas-only-drilling-in-offshore-moratori>

⁵ <https://www.ucsusa.org/clean-energy/coal-and-other-fossil-fuels/environmental-impacts-of-natural-gas#.Wo8QIKjwY2w>

⁶ <http://www.offshore-environment.com/naturalgas.html>

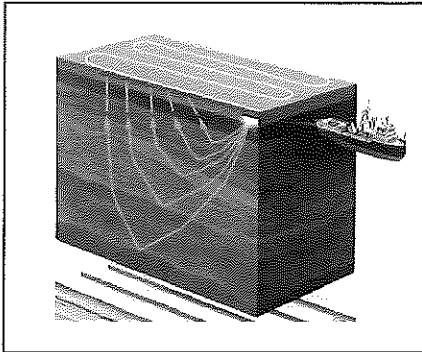
⁷ <http://www.ogj.com/articles/2015/09/bsee-crew-mistakes-caused-2013-gas-well-blowout-fire-in-gulf.html>



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The Facts about Seismic Airgun Blasting

Seismic airgun surveys are the first step in oil and gas exploration. In 2017, five seismic companies asked the National Marine Fisheries Service (NMFS) for IHA (Incidental Harassment Authorization) permits to collectively blast over 90,000 miles of seismic lines in the Atlantic and "incidentally take" hundreds of thousands of whales and dolphins. NMWS granted its authorization on Nov. 30, 2018; the permits are now pending at the Bureau of Ocean Energy Management.



"Incidentally Take" = Harass, Injure or Kill

- Ships tow multiple seismic airguns across the ocean surface in a grid pattern.
- Airguns shoot dynamite-like blasts of compressed air through the water and miles into the seafloor – one of loudest manmade sounds in the ocean.
- Explosive sounds travel up to 2,500 miles from the source and can severely disrupt marine mammals, like whales and dolphins that rely heavily on their sense of sound to navigate, feed, mate and communicate.
- Seismic blasts cause marine animals to leave the area, resulting in up to 40-80% declines in local fish catches.

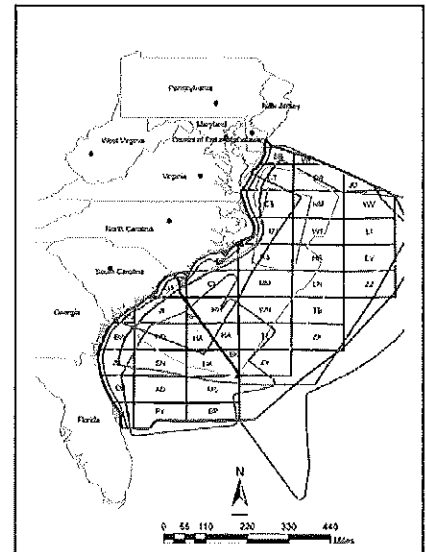
- The 5 pending permits equal over 90,000 miles of seismic lines which will collectively take over 900 days to complete -- or roughly 2.5 years of airgun explosions every 10-15 seconds, 24 hours per day.
- This is an unprecedented scale of noise and geographic area

Under water, there is NO escaping the sound.

SEISMIC DATA?

South Carolina officials often say they want to "know what's out there." But seismic blasting does not definitely locate oil and gas deposits. *Only drilling deep into the ocean floor can tell.* If seismic could pinpoint locations, then Shell Oil would not have spent \$7 Billion drilling a "dry hole" in the Arctic before giving up that project in 2016.

And ... all seismic data is proprietary – it is sold to petroleum companies, and used by the federal government to estimate the potential value of offshore leasing, but isn't available to the public for 25 years.



SEISMIC SCIENCE?

- Over 75 leading marine scientists and researchers have urged the federal government to reject any decision to open the Atlantic to seismic blasting.
- There is insufficient research to understand the long term impact of this unprecedented concentration of seismic airgun noise on marine mammals in an area this size, over this time frame.
- These seismic permits allow hundreds of thousands of marine animals – including whales, dolphins, sea turtles and other sea life – to be harmed or killed.
- A new study published in June 2017 is the first to demonstrate that seismic blasts destroy zooplankton, the foundation of the entire ocean food chain, which ultimately affects human life.

"A deaf whale is a dead whale." Dr. Sylvia Earle, Oceanographer

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Turn over for scientific references

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McCauley R, *et al.* (2017) *Nature Ecology & Evolution*. Article number: 0195. Doi: 10.1038/s41559-017-0195

Seismic Blasting Scientific References (2012-2015). Please refer to the following link for complete list of references submitted in Testimony to the House Natural Resources Committee's Subcommittee on Energy and Mineral Resources by Dr. Douglas Nowacek of Duke University on July 13, 2015.
<https://naturalresources.house.gov/uploadedfiles/nowacektestimony.pdf>

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