

Committee on Natural Resources

Rob Bishop, Chairman
Hearing Memo

September 8, 2015

To: Natural Resource Committee Members

From: Majority Committee Staff
Subcommittee on Energy and Mineral Resources

Hearing: *"The Impacts of Federal Policies on Energy Production and Economic Growth in the Gulf"*

The Natural Resources hearing will take place on **Tuesday, September 15th, 2015 at 9:00 a.m.** at the **Louisiana Supreme Court, 400 Royal Street, New Orleans, LA.** This hearing will focus on the current state of offshore oil and gas activity in the Gulf of Mexico, what measures, if any, the federal government is taking to manage outer Continental Shelf resources to maintain our nation's competitive advantage, and how federal policy decisions impact current and future oil and natural gas development.

Policy Overview

- Offshore energy production in the Gulf of Mexico has long been both an economic and energy lifeline to our nation – today accounting for 17% of our nation's domestic crude production and 5% of our natural gas production.
- Both federal agencies and industry have undergone significant reforms in the years since the Macondo incident to ensure that offshore energy exploration and production could continue safely in the Gulf of Mexico, the Arctic, and eventually in the Atlantic OCS.
- Some federal regulatory measures, such as the well control rule, have the potential to not only hinder future growth in the Gulf – but cause another unintended moratorium in offshore activity. These unintended consequences have the potential to once again cripple the Gulf Region and our entire nation.
- While production in the Gulf has continued – it must not be taken for granted; the federal government must strike an appropriate balance in order to ensure that

offshore production continues in a safe operating environment for the benefit of American energy consumers.

Witnesses

Panel I

The Honorable Bill Cassidy, M.D.
United States Senate

The Honorable David Vitter
United States Senate

Panel II

Lars Herbst
Regional Director
Gulf of Mexico OCS Region
Bureau of Safety and Environmental Enforcement
U.S. Department of Interior

Joe Leimkuhler
Vice President - Drilling
LLOG Exploration Company, L.L.C.

Dr. Joseph R. Mason
Hermann Moyse, Jr./Louisiana Bankers Association Endowed Professor of Banking
Louisiana State University and Senior Fellow, The Wharton School

Lori Davis
President
RIG-CHEM

Jonathan Henderson, JD, MBA
Manager of Gulf of Mexico Field Operations
Gulf Restoration Network

Hearing Focus

The Gulf of Mexico has long been the epicenter for offshore energy exploration and development and has grown to become a hub for technological innovations that increase safety while reducing environmental impacts on surrounding communities. The growth of the offshore energy industry in the Gulf has fostered our nation's energy security, while

also generating significant revenues and economic growth not only for the region, but for our nation as a whole.

In the wake of the Macondo disaster in 2010, the regulatory framework under which the offshore energy industry is currently operating has fundamentally changed. Federal agencies have completely reorganized, industry-driven standards have been revamped, and the regulations that govern the offshore energy supply chain, from seismic exploration, to leasing, to production and refining, have all undergone significant reforms. The long term investments required for offshore drilling projects in the Gulf have helped industry to weather this ever-changing environment. However, we cannot take existing Gulf production for granted. Under the guise of preventing future disasters, proposed regulations such as the well control rule threaten to cause yet another offshore drilling moratorium without providing demonstrable gains in safety.

In 2014, the Gulf of Mexico saw the first slight uptick in crude production in the years following the Macondo incident, while offshore natural gas production wanes in light of less-expensive, onshore developments in shale resources throughout our nation. This hearing will focus on the current state of offshore oil and gas production in the Gulf region, how it is currently functioning under a new regulatory regime, and what measures the federal government is taking in management of our nation's outer Continental Shelf lands to ensure that we are keeping this dynamic region globally competitive.

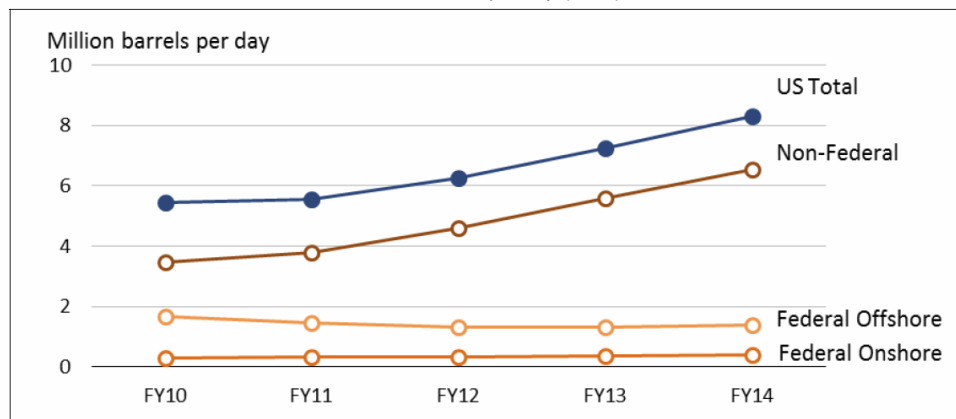
Background

For decades, the Gulf of Mexico has been the preeminent location for offshore oil and natural gas exploration and development. Since the first fixed platform was installed in Gulf Coast waters in the early 20th Century, the Gulf has become an incubator for offshore exploration and development technologies. Where once a multitude of fixed platform rigs were needed to develop an offshore reservoir, today cutting-edge technological breakthroughs have in some cases eliminated the visual presence of oil and gas production above the waterline by utilizing semi-submersible and floating platforms in conjunction with subsea completions and tie-backs. The Gulf has also been the birthplace of deep and ultra-deep water drilling technologies. For example, the deepest offshore well ever drilled was in 2013 by Cobalt International Energy to a total maximum depth of 36,552 feet in over 5,500 feet of water. Today, these technologies are used worldwide as other countries like Canada, Mexico, Brazil, Australia, Russia and others seek to develop energy resources off their coasts.

Oil and natural gas production in federal outer Continental Shelf areas of the Gulf of Mexico has long been a critical component of domestic production in the United States. Crude oil production in the Gulf enjoyed a record year in 2009, with offshore production generating 570,301,125¹ barrels of oil – and accounting for 30% of U.S. crude oil production. In 2009, the Gulf generated 2.5 Trillion cubic feet (Tcf) of natural gas – which accounted for roughly 11% of U.S. natural gas production. Since that time, domestic oil and natural gas production has surged forward on state and private lands throughout the U.S., while Gulf crude oil production has remained stagnant – and offshore natural gas production has dwindled. Today, Gulf crude accounts 17% of our nation’s domestic production, and natural gas has fallen to 5% as production in Texas and North Dakota have outpaced other areas of our nation ².

**Figure I. U.S. Crude Oil Production:
Federal and Non-Federal Areas, FY2010-2014**

Million barrels per day (Mb/d)



Source: Federal data obtained from ONRR Statistics, <http://www.onrr.gov> (using sales year data). Non-federal from EIA. Figure created by CRS.

Table I. Federal OCS Oil and Gas Production as a Percentage of Total U.S. Production, 2005-2014

Year	Oil Production (MMbbl)			Natural Gas Production (Bcf)		
	Federal OCS	Total U.S.	OCS as % of Total U.S.	Federal OCS	Total U.S.	OCS as % of Total U.S.
2005	497.27	1,892.10	26.28 %	3,234.07	23,456.82	17.09 %
2006	501.25	1,856.61	27.00 %	2,993.60	23,535.02	15.42 %
2007	495.02	1,853.24	26.71 %	2,884.13	24,663.66	14.28 %
2008	450.37	1,830.41	24.60 %	2,408.14	25,636.26	11.41 %
2009	594.43	1,954.24	30.42 %	2,521.97	26,056.89	11.65 %
2010	589.67	1,998.58	29.50 %	2,321.19	26,816.09	10.37 %
2011	502.57	2,057.61	24.43 %	1,900.77	28,479.03	7.91 %
2012	483.17	2,370.11	20.39 %	1,585.13	29,542.31	6.27 %
2013	478.12	2,720.78	17.57 %	1,384.70	30,005.25	5.39 %
2014	529.58	3,182.58	16.64 %	1,336.08	31,895.43	4.90 %

¹ <http://www.data.bsee.gov/homepg/pubinfo/repcat/product/Region.asp>

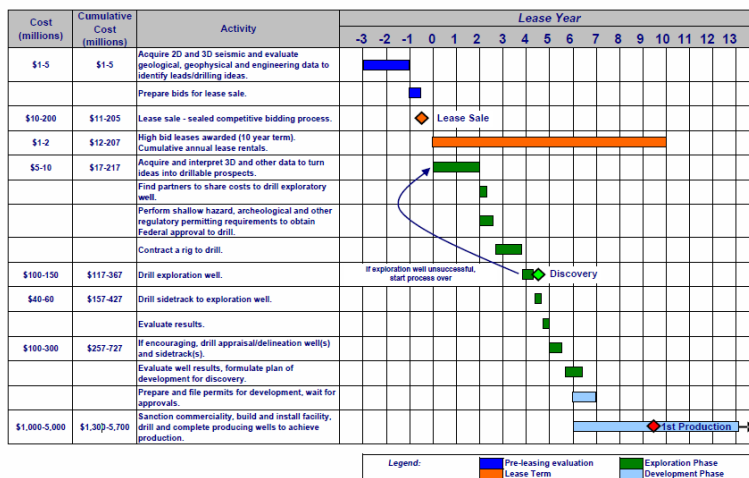
² <http://www.eia.gov/todayinenergy/detail.cfm?id=15631>

Exploration, production, and refining of offshore energy resources not only generates billions of dollars in revenue to federal, state and local governments, but it also generates thousands of direct and indirect jobs. A study produced by Quest Offshore Services in 2011 found that total industry investment and spending in the Gulf Region between 2008 and 2010 alone was \$80 billion, and supported job creation across many industries throughout the nation including manufacturing, machinery, air and marine transport and legal services.³ The study found that in 2010, offshore oil and gas activity in the Gulf of Mexico supported 242,000 jobs nationwide.⁴

The offshore energy industry's far reaching economic ties that extend from the Gulf region throughout our nation were perhaps most apparent in the wake of the Macondo incident, when the Department of the Interior put an immediate one-month moratorium on offshore drilling. The moratorium was eventually extended for months until the Administration officially lifted the moratorium on October 12, 2010. The moratorium had a crippling effect on economic activity in the Gulf region and our nation as a whole. Dr. Joe Mason, Chair of Banking at Louisiana State University's Ourso School of Business estimated that the "effective six-month moratorium on offshore oil and natural gas production [would] result in the loss of approximately \$2.1 billion in output, 8,169 jobs, over \$487 million in wages, and nearly \$98 million in forfeited state tax revenues in the Gulf states alone."⁵ In many ways, the Gulf is still recovering from the devastating economic impacts of the offshore moratorium; last year marked the first slight uptick in offshore energy production post-Macondo with the Gulf generating 510,535,201 barrels of crude.

The EIA projects that oil and natural gas production in the Gulf of Mexico will continue to increase in the short term, citing thirteen new fields expected to come online in 2015 and 2016.⁶ Given that an offshore, deepwater well can take on average between seven and eight years from initial lease sale to reach commercial production, EIA also projects that current crude oil prices are not expected to impact future production in the Gulf. However, this report fails

Gulf of Mexico Deepwater Frontier Exploration and Production Timeline
Individual Prospect: 5,000' Water Depth, 30,000' Drilling Depth



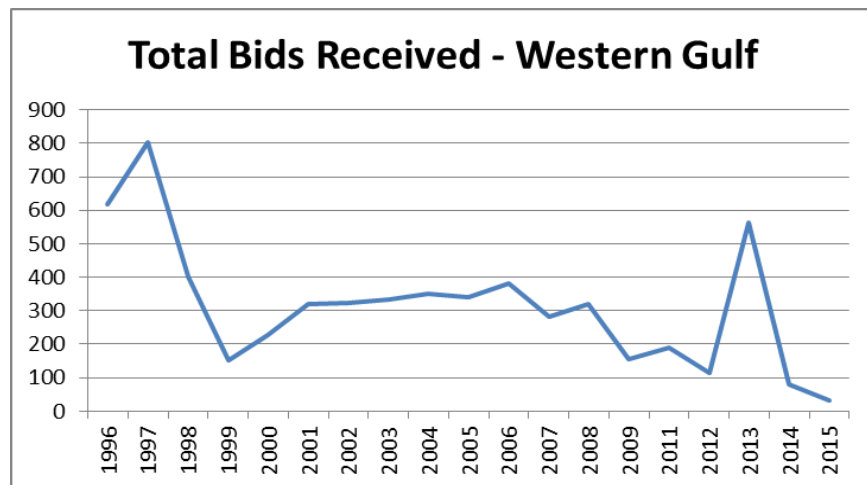
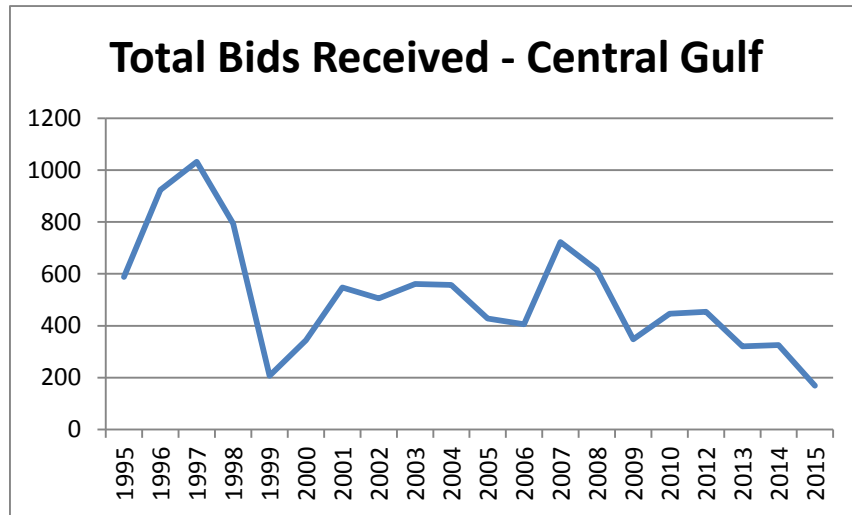
³ <http://www.api.org/~media/Files/Policy/Jobs/QuestGoMEconomicAnalysis7-11-2011.pdf>, p. 2-4

⁴ <http://www.api.org/~media/Files/Policy/Jobs/QuestGoMEconomicAnalysis7-11-2011.pdf>, p. 6.

⁵ <http://instituteeforenergyresearch.org/wp-content/uploads/2010/07/Mason-Economic-Cost-of-Offshore-Moratorium.pdf>

⁶ <http://www.eia.gov/todayinenergy/detail.cfm?id=20192>

to acknowledge the impact current crude oil prices are having on industry investments in offshore leasing in the Gulf of Mexico. Specifically, the two most recent offshore lease sales held in the Gulf of Mexico this March and August (Lease Sales 235 and 246) had the lowest number of bids on offshore leases in twenty years (see charts below).⁷



Low crude oil prices, coupled with the onerous burdens of the proposed well control rule threaten future development in the Gulf. Even though EIA projections of increased

⁷ Charts compiled by committee staff from data available at: <http://www.boem.gov/WGOM-Sale-Bids-Received-By-Water-Depth/> and <http://www.boem.gov/CGOM-Sale-Bids-Received-By-Water-Depth/>.

production in the Gulf of Mexico cite 13 new deepwater prospects⁸ that are expected to come online in 2015 and 2016, every single operator of the new projects cited in the EIA report have submitted comments on the proposed well-control rule, saying that provisions in the rule will curtail their existing offshore operations. In some cases, the proposed will make many of the prospective wells no longer economically viable to develop.

For instance, LLOG's Delta House project⁹ is a floating production system that will couple production from multiple discoveries in the Mississippi Canyon – two of which are cited in the EIA report (Marmalard and Son of Bluto 2). While LLOG seeks to expand future production at this facility which in turn will lend itself to increased production in the Gulf, this future production is in jeopardy under the current regulatory environment. LLOG estimates that 16 of their future wells do not meet current design requirements that are proposed in draft rule which they project will lead to over \$1 billion in lost economic activity and over 100 million barrels in lost reserves:

“Ultimately over the remaining field life of these seven deepwater fields the loss of these wells represents a loss of over 6 billion in gross revenue to LLOG and 900 million in lost royalty payments to the federal government for wells LLOG would have drilled but did not due to the proposed changes in well design and drilling margin...”¹⁰

This is just one example from one independent operator in the Gulf of Mexico which foreshadows the ultimate impact that regulatory measures could have on future oil and gas production.

Other regulatory measures that could play a role in fostering future growth in the Gulf of Mexico and nationwide include lifting the current crude export ban. In a report released this September, the EIA found that removal of current restrictions on crude oil exports: “would result in higher wellhead prices for domestic producers, who would then respond with additional production,” while also potentially lowering domestic gasoline prices.¹¹ Currently, all oil and natural gas produced in the Gulf of Mexico falls under export restrictions in the Outer Continental Shelf Leasing Act¹² which require adherence to the Export Administration Act, and prevents exports unless a national-interest determination by the President and consent of Congress is achieved.

⁸ <http://www.eia.gov/todayinenergy/images/2015.03.03/table.png>

⁹ <http://www.offshore-mag.com/articles/print/volume-73/issue-6/gulf-of-mexico/llog-eyes-2015-delta-house-startup.html>

¹⁰ <http://www.regulations.gov/#!documentDetail;D=BSEE-2015-0002-0117>

¹¹ <http://www.eia.gov/analysis/requests/crude-exports/>

¹² 43 U.S. Code § 1354

Future Impacts of Regulatory Changes – Potential Moratorium-2

In the wake of the Macondo disaster on April 20th, 2010, both industry and BSEE developed and implemented a number of changes to the federal regulatory framework. Many of these changes addressed the recommendations of the JIT and BP Commission reports, and have since been put into place through regulatory action. Since the incident, the Department and its appropriate agencies have made substantial changes to policies affecting offshore activities including the new requirements to policies for Safety and Environmental Management Systems (SEMS)¹³ which was later updated in April of 2013 (SEMS II); and the recently proposed Well Control Rule – originally known as the blowout preventer rule.

On April 13, 2015, the Department of the Interior announced a new proposed offshore regulation known as the well control rule aimed at improving equipment and well control designs. The proposed rule seeks to update existing regulations currently in place related to the design, manufacture, and repair of blowout preventers (BOPs). Additionally, the rule requires yearly outside review of all maintenance related records to ensure that manufacturers' standards were kept as intended.¹⁴ Finally, the rule addresses safety concerns well beyond simply addressing the blowout preventer by also requiring:

- Strict adherence to new “safe drilling margins”;
- Real-time monitoring capability between offshore operations and onshore technical experts¹⁵;
- Performance objectives for the use of remotely operated vehicles (ROVs) to assist in closing the BOP stack; and
- Use of centralizers in cementing operations.

The extended comment period for this highly technical rule ended on July 16, 2015 and BSEE is currently in the process of reviewing public comments.

While the overall aim of all federal regulatory actions post-Macondo is to minimize risk and improve safe exploration and production in our nation's outer Continental Shelf, the measurable safety benefits of these prescriptive regulations has been called into question. Most recently with the well control rule, several companies with current offshore operations in the Gulf of Mexico have highlighted that a performance-based approach would be more beneficial moving forward in the Gulf in order to ensure that safe operations continue without hindering new technological innovations in safety as well as

¹³ <http://www.crs.gov/pdfloader/R42942>; p.11.

¹⁴ http://www.nytimes.com/2015/04/14/us/new-regulation-aims-to-prevent-explosions-at-offshore-rigs.html?_r=0

¹⁵ Ibid.

future exploration and production activities. Selected public comments from industry experts on the potentially devastating impacts of the rule include:

- "...the rules if adopted would have an opposite effect than intended and would ultimately prove detrimental to both safety and the environment" (Exxon Mobil)¹⁶
- "[result] in potentially significant operational challenges, downtime and associated costs per year, and over 200 million barrels of oil equivalent of stranded resources from our assets currently on production, with little to no corresponding enhancement to safety" (Shell)¹⁷
- "Requirements that would be imposed by the proposed rule unreasonably fail to take into account the best available and safest technologies and instead impose arbitrary requirements that are neither reasonable, practicable, nor economically or technologically feasible. The result in certain instances would be a decrease safety while at the same time undermining the ability to develop a critical national resource." (Chevron)¹⁸
- "The current proposed rules...establish prescriptive requirements that, in many cases, are either unworkable or ill advised. They would not reduce risk but in some cases would introduce new risk...In total, these proposed rules will also add an unjustified economic burden that would significantly reduce current and future U.S. offshore oil and natural gas production and resource recovery." (Statoil)¹⁹
- "has technically flawed logic" and "the lack of availability of upgrade equipment and the time estimated to manufacture and install same will result in a **shutdown of the majority of the Gulf of Mexico rig fleet for a substantial period of time.**" (Murphy Oil)²⁰ (emphasis added)

In nearly all public comments from companies that are safely drilling under the current regulatory framework in the Gulf of Mexico at present, technologically-flawed provisions of the rule are highlighted, as well as prescriptive requirements on currently utilized drilling techniques (known as drilling margins) that would render both existing and future oil and gas production no longer economically feasible. **If finalized as written, 110 of the 175 wells, or 63%, that have already safely been drilled post-Macondo in the Gulf of Mexico would fail to be in compliance with provisions in the well-control rule.**²¹ While BSEE estimates the overall cost of the rule to be \$883 million over ten

¹⁶ <http://www.regulations.gov/#!documentDetail;D=BSEE-2015-0002-0150>

¹⁷ <http://www.regulations.gov/#!documentDetail;D=BSEE-2015-0002-0130>

¹⁸ <http://www.regulations.gov/#!documentDetail;D=BSEE-2015-0002-0166>

¹⁹ <http://www.regulations.gov/#!documentDetail;D=BSEE-2015-0002-0122>

²⁰ <http://www.regulations.gov/#!documentDetail;D=BSEE-2015-0002-0028>

²¹ <http://www.regulations.gov/#!documentDetail;D=BSEE-2015-0002-0154>

years²², an API-commissioned Quest study estimated the cumulative direct costs on industry to be \$32 billion over ten years²³.

The overarching theme of the proposed well control rule alone is that provisions do not address the root causes for the Macondo disaster, add complexity without putting proven methods in place that reduce risk, and if finalized as written, may lead to another moratorium in Gulf exploration and production.

²² <http://www.gpo.gov/fdsys/pkg/FR-2015-04-17/pdf/2015-08587.pdf>; p.38.

²³ <http://www.regulations.gov/#!documentDetail;D=BSEE-2015-0002-0154>; p.90.