AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

THE IMPACTS OF FEDERAL POLICIES ON ENERGY PRODUCTION AND ECONOMIC GROWTH IN THE GULF

OVERSIGHT FIELD HEARING

BEFORE THE

COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTEENTH CONGRESS

FIRST SESSION

Tuesday, September 15, 2015, in New Orleans, Louisiana

Serial No. 114–19

Printed for the use of the Committee on Natural Resources



Available via the World Wide Web: http://www.fdsys.gov
or
Committee address: http://naturalresources.house.gov

U.S. GOVERNMENT PUBLISHING OFFICE

96–241 PDF WASHINGTON : 2016

For sale by the Superintendent of Documents, U.S. Government Publishing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

COMMITTEE ON NATURAL RESOURCES

ROB BISHOP, UT, *Chairman*
RAÚL M. GRIJALVA, AZ, *Ranking Democratic Member*

Don Young, AK
Louie Gohmert, TX
Doug Lamborn, CO
Robert J. Wittman, VA
John Fleming, LA
Tom McClintock, CA
Glenn Thompson, PA
Cynthia M. Lummis, WY
Dan Benishek, MI
Jeff Duncan, SC
Paul A. Gosar, AZ
Raúl R. Labrador, ID
Doug LaMalfa, CA
Jeff Denham, CA
Paul Cook, CA
Bruce Westerman, AR
Garret Graves, LA
Dan Newhouse, WA
Ryan K. Zinke, MT
Jody B. Hice, GA
Aumua Amata Coleman Radewagen, AS
Thomas MacArthur, NJ
Alexander X. Mooney, WV
Cresent Hardy, NV
Vacancy

Grace F. Napolitano, CA
Madeleine Z. Bordallo, GU
Jim Costa, CA
Gregorio Kilili Camacho Sablan, CNMI
Niki Tsongas, MA
Pedro R. Pierluisi, PR
Jared Huffman, CA
Raul Ruiz, CA
Alan S. Lowenthal, CA
Matt Cartwright, PA
Donald S. Beyer, Jr., VA
Norma J. Torres, CA
Debbie Dingell, MI
Ruben Gallego, AZ
Lois Capps, CA
Jared Polis, CO
Wm. Lacy Clay, MO

Jason Knox, *Chief of Staff*
Lisa Pittman, *Chief Counsel*
David Watkins, *Democratic Staff Director*
Sarah Parker, *Democratic Deputy Chief Counsel*

CONTENTS

	Page
Hearing held on Tuesday, September 15, 2015	1
Statement of Members:	
Bishop, Hon. Rob, a Representative in Congress from the State of Utah	2
Prepared statement of	4
Statement of Witnesses:	
Cassidy, Hon. Bill, a United States Senator from the State of Louisiana	8
Prepared statement of	10
Davis, Lori, President, RIG-CHEM	38
Prepared statement of	40
Henderson, Jonathan, JD, MBA, Manager of Gulf of Mexico Field Operations, Gulf Restoration Network	33
Prepared statement of	35
Herbst, Lars, Regional Director, Gulf of Mexico OCS Region, Bureau of Safety and Environmental Enforcement, U.S. Department of the Interior	12
Prepared statement of	14
Questions submitted for the record	19
Leimkuhler, Joseph, Vice President, Drilling, LLOG Exploration Company, LLC	25
Prepared statement of	27
Mason, Joseph R., Hermann Moyse, Jr./Louisiana Bankers Association, Endowed Professor of Banking, Louisiana State University; and Senior Fellow, The Wharton School	41
Prepared statement of	43
Vitter, Hon. David, a United States Senator from the State of Louisiana	5
Prepared statement of	7
Additional Materials Submitted for the Record:	
International Association of Drilling Contractors, Houston, Texas, Prepared statement of	69

OVERSIGHT FIELD HEARING ON THE IMPACTS OF FEDERAL POLICIES ON ENERGY PRODUCTION AND ECONOMIC GROWTH IN THE GULF

Tuesday, September 15, 2015
U.S. House of Representatives
Committee on Natural Resources
New Orleans, Louisiana

The committee met, pursuant to call, at 9:00 a.m., at Louisiana Supreme Court, 400 Royal Street, New Orleans, Louisiana, Hon. Rob Bishop [Chairman of the Committee] presiding.

Present: Representatives Bishop, Fleming, Westerman, Graves, Rice, and Smith.

The CHAIRMAN. This committee will come to order.

I appreciate the opportunity of being here. I also appreciate our hosts here, and I would like to recognize at the beginning Representative Graves for an introduction of one of our hosts.

Mr. GRAVES. Thank you, Mr. Chairman.

I am honored that we have with us today a local artist and Harley rider who has joined us this morning. He also happens to be a justice of the Supreme Court, Justice John Weimer, who is a graduate of Nicholls State University and Louisiana State University Law School, the father of three great daughters; and, of course, his wife Penny. We are very much honored to have Justice Weimer here.

Justice, thank you very much for your efforts to raise the court for us today.

Justice WEIMER. Thank you, Congressman.

Bonjour, and bienvenue. That is Cajun French for "good day" and "welcome."

My name is John Weimer. I serve on the court here, and on behalf of the Chief Justice and my fellow associate justices, we welcome you.

Over 200 years ago, one of the Founding Fathers of our Nation recognized the economic and strategic significance of Louisiana to the destiny of our Nation. Thomas Jefferson signed the Louisiana Purchase just over 200 years ago.

One who had become president recognized the economic and strategic significance of Louisiana to the destiny of our Nation. Andrew Jackson risked his life on the plains of Chalmette at the Battle of New Orleans.

What Jefferson and Jackson recognized over 200 years ago has been realized. Louisiana fuels this Nation's economy with oil and gas. Louisiana feeds this Nation with seafood, the crabs, shrimp, oysters, fish, crawfish, and I understand an occasional alligator harvested here in Louisiana.

Now, in the spirit of full disclosure, Congressman Graves and I have a relationship. Our nephew, David Clavell, serves on his staff, and in south Louisiana, that is considered a relationship. David was involved in ensuring that we were here today, and I commend him for his efforts in that respect.

We are very pleased to have you in this historic venue, in this historic city, in our state of Louisiana. Again, bienvenue and merci beaucoup.

Mr. GRAVES. Thank you.

The CHAIRMAN. Thank you, Mr. Justice. I appreciate that, appreciate being in this historic building, and for your kindness in letting us in here.

Before you go, how do you say "you all" in French?

Justice WEIMER. "Y'all."

The CHAIRMAN. OK, fine.

[Laughter.]

The CHAIRMAN. You did that very well. Thank you so much.

The committee is meeting today to hear testimony on the impact of Federal policies on energy production and economic growth in the Gulf, and under Committee Rule 4(f), all opening statements in the hearing will be limited to the Chairman, the Ranking Member, the Minority Member, and the Vice Chair and designees. Therefore, I am going to ask unanimous consent that all other Members' opening statements be made part of the hearing record if they are submitted to the Clerk by 5:00 p.m. today. Hearing no objection, that is so ordered.

I am also asking unanimous consent that the gentleman from South Carolina, Mr. Rice, and the gentleman from Missouri, Mr. Smith, be allowed to sit with this committee and participate in today's hearing.

And last, should their schedules permit, I ask unanimous consent that former House Members Vitter and Cassidy, who have now moved over to the dark side, be allowed to sit with the committee and participate as well. Hearing no objections, once again, so ordered, and we appreciate all of you for being here with us, with our committee.

I now recognize myself for a quick opening statement.

STATEMENT OF THE HON. ROB BISHOP, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF UTAH

The CHAIRMAN. I would like to first begin by thanking the state of Louisiana for hosting us in this Supreme Court building.

Today's hearing will focus on the current state of the Gulf offshore energy production.

Energy production in the Gulf of Mexico is the energy lifeline for our entire Nation, providing 17 percent of our domestic crude and 5 percent of our natural gas. Those percentages, though, are insignificant. The amount that is being produced is important. The bottom line is we could be doing better, we should be doing better, and this Nation must have us do better.

While production in the Gulf has remained relatively stagnant, skyrocketing oil and natural gas production on state and private lands has propelled the United States to surpass Saudi Arabia and Russia to become a global leader in energy production. This

newfound role for our country could not be achieved, though, without the Gulf. Yet, we cannot take this position for granted. If we indeed are going to be a permanent leader in the area of energy production, so that we can be an asset to our allies and we can actually not be bullied by OPEC, we need to produce more on Federal lands and offshore. Both of those are the purview of this committee, and that is why I am happy to be here for this hearing.

Each Gulf state manages some acreage off the coast, but the vast majority of the acreage in the Gulf of Mexico is managed by the Federal Government, which has massive amounts of energy resources. So, the question is: Is it being managed well? And that is precisely the question we are here today to explore.

Are there examples of how the Interior Department has been dead wrong in their so-called "management" of Federal lands and offshore? For example, the Obama administration's 2010 moratorium, which shut down all drilling in the Gulf for months after the Macondo incident. Thankfully that mistake was eventually overturned by the court, but not without having some severe economic consequences.

Agency regulations such as the proposed Well Control Rule threaten another virtual shutdown. Some provisions of this rule would actually undermine safety, rather than enhance it. If we indeed have rules that are prospective, prescriptive, and preclude the ability of having new innovations to promote safety, we are not actually helping the situation at all.

Interestingly, after announcing this hearing, the Bureau of Safety and Environmental Enforcement scheduled meetings in Washington for today to discuss these onerous provisions. That is quite a coincidence.

It is important to note that all Gulf offshore operators, even the agencies, have undergone significant regulatory reforms to ensure operations are safer than ever before. Earlier this year, our committee explored that specific issue. The conclusion was clear: overly prescriptive regulations such as the Well Control Rule wouldn't just harm the Gulf economically, it would impact our Nation as a whole. A performance-based approach will allow for increased safety, regulatory certainty, and will allow agencies to keep pace with the technology curve. Our hearing, I hope, will support that premise today.

Other Federal measures, such as the crude export ban, limit new market opportunities and U.S. production potential. EIA reported recently that they found that lifting the crude export ban would result in higher wellhead prices for domestic producers, who would respond with additional production, while potentially lowering gas prices for American families.

The same is true for LNG exports. We should encourage the production of affordable energy, not continue policies that force companies to shut down those resources because they are not economic to bring to market. It is important for our economy that we encourage affordable energy, and it is important for people and their lives that we have affordable energy.

What we have seen recently is two offshore lease sales that yielded the lowest number of bids in over 20 years, natural gas production is falling, offshore crude production only now is showing signs

of recovery since the moratorium, and the Interior Department continues to require nonsensical regulations. This is not the path that will keep our Nation on a path forward through a position of energy strength.

There are thousands of employees who work off these coasts, and they deserve better. Day in and day out, the Gulf Coast residents go to work to support this critical energy infrastructure. They are vested in keeping these operations safe and to protect the beaches and the Atlantic waterways that they visit with their families. This industry is their livelihood. That is significant.

I look forward to hearing from witnesses on the significant impact of the Federal Government's regulations and recognize the importance of the Gulf's energy to the economic lifeline of our Nation.

[The prepared statement of Mr. Bishop follows:]

PREPARED STATEMENT OF THE HON. ROB BISHOP, CHAIRMAN, COMMITTEE ON NATURAL RESOURCES

I'd like to first begin by thanking the great state of Louisiana for hosting us in their Supreme Court building. Today's hearing will focus on the current state of Gulf offshore energy production. Energy production in the Gulf of Mexico is an energy lifeline for our Nation—today providing *17 percent* of our domestic crude and *5 percent* of our natural gas.

While production in the Gulf has remained relatively stagnant over the past several years, skyrocketing oil and natural gas production on state and private lands has propelled the United States to surpass Saudi Arabia and Russia to become the global leader in energy production. This newfound role for our country could not be achieved without the Gulf. Yet, we cannot take this position for granted.

While each Gulf state manages some acreage off their coasts—the vast majority of acreage in the Gulf of Mexico is managed by the Federal Government, and it contains a massive amount of energy resources. The question is: Is it being managed well? That is precisely the question we're here today to explore.

Many examples demonstrate how the Interior Department has been dead wrong in their so-called "management" of Federal lands. For example, the Obama administration's 2010 moratorium, which shut down all drilling in the Gulf for months after the Macondo incident. Thankfully, that costly mistake was eventually overturned by the courts—but not without severe economic consequences.

Agency regulations such as the proposed well-control threaten another moratorium by shutting down the majority of the Gulf rig fleet. Some provisions of this rule could actually undermine safety, rather than enhance it. Interestingly, *after* we announced this hearing, the Bureau of Safety and Environmental Enforcement scheduled meetings in Washington for today to discuss these onerous provisions. That is quite the coincidence.

It is important to note that all Gulf offshore operators—even the agencies—have undergone significant regulatory reforms to ensure operations are safer than ever before. Earlier this year, our committee explored that specific issue. The conclusion was clear: overly prescriptive regulations such as the Well Control Rule wouldn't just harm the Gulf economically—it would impact our Nation as a whole. A performance-based approach will allow for increased safety and regulatory certainty, and will allow agencies to keep pace with the technology curve.

Other Federal measures, such as the crude export ban, limit new market opportunities and U.S. production potential. An EIA report released earlier this month found that lifting the crude export ban would result in higher wellhead prices for domestic producers, who would then respond with additional production—all while potentially lowering gas prices for American families.

The same is true for LNG exports. We should encourage the production of affordable energy, not continue decades-old policies that force companies to shut-in those resources because they are not economic to bring to market.

What we have seen recently is two offshore lease sales yielding the lowest number of bids in over 20 years, natural gas production is falling, offshore crude production only now showing signs of recovery since the moratorium, and the Interior Department continues to issue nonsensical regulations. This is not the path that will keep our Nation on a path forward through a position of energy strength.

The thousands of employees who work off these coasts deserve better. Their hard work has helped decrease our dependence on foreign oil. Day in, day out—Gulf Coast residents go to work on rigs, vessels or small businesses that support this critical energy infrastructure. They are vested in keeping these operations safe—to protect the beaches and inland waterways they visit with their families. This industry is their livelihood.

I look forward to hearing from our witnesses on the Federal Government's harmful regulations and to recognize how important the Gulf's energy and economic lifeline is to our Nation.

Now I would also like to introduce our first panel who is with us today. We have both Senators from the great state of Louisiana who are here, The Honorable Bill Cassidy and The Honorable David Vitter.

Mr. Cassidy, on my script I have you actually going first. Do you two care? Do I go on seniority? Do I go on who can give me the most money?

[Laughter.]

The CHAIRMAN. Seniority, then, it is.

Senator Vitter, Representative Vitter, we are happy to have you here. We would ask you for your testimony.

STATEMENT OF HON. DAVID VITTER, A UNITED STATES SENATOR FROM THE STATE OF LOUISIANA

Senator VITTER. Thank you very much, Chairman Bishop and members of this committee, for being here—welcome to Louisiana—and for holding this important hearing on the impacts of Federal policies on energy production and economic growth in the Gulf. And a special thanks to Congressmen Fleming and Graves for inviting me here and hosting me here.

Mr. Chairman, in the spirit of your earlier comments, just for the record, don't drink from the water fountains on the Senate side. I try to maintain a strong, vibrant House personality. So, in that spirit, I would love to join the committee after our testimony, but unfortunately I have to go immediately to the airport to return for votes.

It has been nearly 5½ years since the BP disaster devastated the Gulf region. Beyond the economic and environmental consequences—which were major, and of course we will talk about those—I want to begin by acknowledging the human tragedy and the loss of 11 fine men who were working on the rig: specifically Jason Anderson, 35, of Midfield, Texas; Aaron Dale "Bubba" Burkeen, 37, of Philadelphia, Mississippi; Donald Clark, 49, of Newellton, Louisiana; Stephen Ray Curtis, 40, of Georgetown, Louisiana; Gordon Jones, 28, of Baton Rouge, Louisiana; Roy Wyatt Kemp, 27, of Jonesville, Louisiana; Karl Dale Kleppinger, Jr., 38, of Natchez, Mississippi; Keith Blair Manuel, 56, of Gonzales, Louisiana; Dewey Revette, 48, of State Line, Mississippi; Shane Roshto, 22, of Liberty, Mississippi; and Adam Weise, 24, of Yorktown, Texas. I think it is very important to acknowledge that horrible human loss and remember them, and their families, in our prayers.

For 3 months after that horrendous explosion, more than 200 million gallons of crude oil spilled into the Gulf of Mexico, resulting

in billions of dollars of economic and environmental damages that the Gulf region is still recovering from.

But, Mr. Chairman, there was additional great loss, and that additional great loss was completely avoidable. That came from the Obama administration's short-sighted and knee-jerk reaction, particularly in the way they imposed a 6-month drilling moratorium, and after that a de facto moratorium or "permatorium" that only compounded and multiplied the devastation of the spill.

That is important to note because I think that is the continuing context that some of these overly onerous regulations are part of. It is part of a devastating pattern. This initial moratorium was particularly noteworthy because President Obama's White House put out statements saying, suggesting that the panel of experts they immediately empaneled after the spill recommended the moratorium.

That was a lie, a flat-out lie, and the experts eventually said that and made that clear. So the Administration just used that to justify a needless moratorium and all of the economic costs that it brought with it.

In the years since, I have worked with many others to ensure that this kind of tragedy and subsequent economic loss never happens again. Certainly as a state and a Nation, we need a clear and a strong regulatory scheme that promotes stringent safety standards while allowing the industry to thrive and do its business. While many important reforms have been made, there is still important work to be done.

Louisiana's offshore oil and gas development isn't just one of the state's largest economic drivers; it is a way of life for so many, providing careers and livelihoods for so many in the region. The industry has operated harmoniously alongside other critical offshore and coastal industries, like commercial and recreational fishing and tourism.

While the recent energy boom of the last few years in the United States has helped Louisiana recover from President Obama's drilling moratorium with a dramatic dip in price, I am particularly concerned now about the continuing regulatory avalanche coming from the Obama administration aimed at oil and gas.

I know that this committee and others are examining the Department of the Interior's proposed Well Control Rule, and I encourage those determined efforts. Some stakeholders have conveyed to me that that proposal could have substantial economic impacts throughout the offshore oil and gas supply chain, which our state and region cannot afford. So, we must get to the bottom of that.

President Obama's attack on the oil and gas industry is not restricted to offshore exploration and development. There are a myriad of regulations coming our way that will have disastrous effects on onshore oil and gas businesses, such as the recently proposed methane rules for upstream oil and gas operations and the pending proposal to reduce the standard for ground-level ozone. These proposals, and many others that this and other committees have looked at, are likely to impose dramatic new economic burdens on the industry, which has been one of the few bright spots in the economy under President Obama.

So again, Mr. Chairman, I think the key point is that this is part of a pattern. It is a pattern we saw starting with the moratorium which was based on lies out of the White House about the recommendations of the panel of experts. It is a pattern that includes many, many regulatory overreaches, significant new burdens being placed on the economy with little or no positive health, safety, or environmental impact.

Protecting the health of the oil and gas industry is critical for all of us, for Louisiana and for the Nation. So, Mr. Chairman, thank you for this opportunity to testify and for this committee coming to the Gulf, coming to Louisiana as part of that important effort.

[The prepared statement of Mr. Vitter follows:]

PREPARED STATEMENT OF THE HON. DAVID VITTER, A UNITED STATES SENATOR FROM THE STATE OF LOUISIANA

Thank you Chairman Bishop and members of this committee for holding this important hearing on "The Impacts of Federal Policies on Energy Production and Economic Growth in the Gulf."

It has been nearly 5½ years since the Deepwater Horizon explosion and subsequent oil spill, which killed 11 men who worked on the rig. Their names were: Jason Anderson, 35, Midfield, Texas; Aaron Dale "Bubba" Burkeen, 37, Philadelphia, Mississippi; Donald Clark, 49, Newellton, Louisiana; Stephen Ray Curtis, 40, Georgetown, Louisiana; Gordon Jones, 28, Baton Rouge, Louisiana; Roy Wyatt Kemp, 27, Jonesville, Louisiana; Karl Dale Kleppinger, Jr., 38, Natchez, Mississippi; Keith Blair Manuel, 56, Gonzales, Louisiana; Dewey Revette, 48, State Line, Mississippi; Shane Roshto, 22, Liberty, Mississippi; and Adam Weise, 24, Yorktown, Texas.

The leak went on for about 3 months, dumping more than 200 million gallons of crude oil into the Gulf and resulting in untold billions of dollars in economic damages. Our economy and environment are still recovering from it today.

Worse than the spill itself, however, was the way in which the Administration reacted to it by imposing a 6-month drilling moratorium and, after that, a de-facto moratorium that had devastating economic impacts throughout Louisiana and the Gulf Coast.

Despite the tragic events of 5½ years ago, offshore oil and gas development has played a huge role in our economy for decades and has operated extremely well alongside other critical offshore and coastal industries like fishing and tourism. For example, in 2013 there were nearly 130,000 direct and indirect jobs in Louisiana supported by the offshore energy industry. At the same time, our state set an all-time record for tourism, attracting 27.3 million visitors who spent $10.8 billion and contributed $800 million in state tax revenues. On top of all that, one-third of the fish caught in the Lower 48 are landed right here in Louisiana.

While the recent energy boom in the United States has helped Louisiana recover from President Obama's disastrous drilling moratorium and de-facto moratorium, I am deeply concerned about a regulatory avalanche coming from the Obama administration, aimed toward oil and gas.

This committee is familiar with the Department of the Interior's proposed Well Control Rule. After Deepwater Horizon, a number of changes were made by industry and the Federal Government to improve offshore safety, and much progress has been made in ensuring that such a disaster never happens again.

But what has been conveyed to me about this well control proposal is that it will have substantial economic impacts throughout the offshore oil and gas supply chain and could lead to another offshore drilling moratorium. That would obviously be crippling to Louisiana and its economy.

But there are also threats to industry onshore, such as the recently proposed methane rules for upstream oil and gas operations, and the pending proposal to reduce the standard for ground level ozone, both of which are EPA regulations.

These proposals, and several others that this and other committees have looked at, are going to impose substantial economic burdens on the oil and gas industry, which has been one of the few bright spots in the Obama economy. A healthy oil and gas industry—both onshore and offshore—is critical to having a vibrant economy in Louisiana and throughout the Gulf Coast.

Mr. Chairman, I want to thank you for inviting me to testify today.

The CHAIRMAN. Thank you, Senator. We appreciate you being here and giving us your testimony. We also wish you could stay with us. We realize you have to go, but thank you for what you are doing for the Nation, as well as for your home state. Thank you very much.

Next we turn to Congressman-turned-Senator Cassidy. You are recognized for your opening statement as well.

STATEMENT OF HON. BILL CASSIDY, A UNITED STATES SENATOR FROM THE STATE OF LOUISIANA

Senator CASSIDY. Mr. Bishop, thank you for your testimony, which I found excellent.

Representative Smith, I am glad to see you survived your gator hunt.

[Laughter.]

Senator CASSIDY. I hope it was productive.

I thank you all for being here and for holding this hearing today, bringing greater attention to the energy production and its economic impact along the Gulf Coast.

The energy activities in the coastal Gulf states and the adjacent offshore waters have produced billions of barrels of oil and trillions of cubic feet of natural gas. They have been an important contributor to the domestic energy production which is critical for our country's energy independence and security. Every barrel of oil and cubic foot of natural gas produced in the Gulf of Mexico eliminates the need for energy from foreign sources.

Unfortunately, the actions and policy of this Administration are counter-productive, literally. For example, one thing that is of particular importance to us in Louisiana is the Administration's proposal to redirect coastal restoration funds, or GOMESA funds, that are scheduled to come to Louisiana beginning in 2017. A little ironically, a few weeks ago President Obama visited New Orleans to commemorate the region's rebirth on the 10th anniversary of Hurricanes Katrina and Rita. Yet, the sustainability of Louisiana's recovery is being placed in jeopardy by the President's Fiscal Year 2016 budget proposal. This proposal would redirect revenue derived from the energy production off Louisiana's coast toward unrelated projects. Louisiana is relying upon this revenue because, by our state constitution, it will be used to restore Louisiana wetlands.

Now, just to put this in perspective, Louisiana is experiencing unparalleled land loss due to Federal engineering decisions made nearly a century ago that have channeled the lower Mississippi River system for the benefit of the rest of the Nation. Louisiana's 2,300 square miles of land loss is largely attributed to this channelization, which was abetted by the placement of levies along the river system, and this has converted a once-growing delta plain to the greatest source of wetlands loss in our history.

Louisiana is counting on the revenues derived from offshore energy production to fund a portion of the projects necessary to restore our coast. Close to 18 percent of Louisiana's oil production and about 24 percent of its natural gas production originates, is transported through, or is processed in Louisiana's coastal wetlands. This is important not just for us but, as this shows, also for

the rest of the Nation, and Congressman Graves is the expert on this.

Over 500 tons of water-borne cargo passes through Louisiana's system of deep draft ports and navigational channels each year. If the present land loss rates continue, more than 155 miles of waterways and several ports will be exposed to open water within 50 years. This is important not just for Louisiana, but for all those farmers in the Mississippi Valley system who rely upon these ports to send their products to international markets.

Now, related to this, Louisiana depends upon the revenue from production in the Gulf of Mexico, as does the Nation, to restore our wetlands. A second way the Obama administration's policies negatively affect this revenue stream is by locking up the Outer Continental Shelf's acreage which could be leased. Under this Administration, as you noted, Mr. Chairman, less than 2 percent of the 1.71 billion Federal Outer Continental Shelf acreage is under lease. Over 63 million acres in the Gulf of Mexico alone remain locked up. This lost opportunity results in fewer jobs, less government revenue, and a greater reliance upon foreign sources of oil.

If the draft proposed plan for offshore production is finalized in 2016, the Obama administration will have effectively controlled a decade of offshore oil and gas lease planning. The draft 5-year plan for 2017 to 2022 lists 14 sales. As you noted, this is the lowest number of lease sales in the 42-year history of the planning process.

Now, the second issue is supply constraints or access. Despite the Obama administration's policies, according to the Energy Information Administration, in the short term the Gulf of Mexico is expected to defy the overall trend of decreased production domestically because of lower oil prices, et cetera, and will continue to produce oil.

However, these offshore fields require both surface and subsea production equipment, and if the low oil price persists and operators cannot develop unique ways to decrease the capital required for these new projects and/or improve recovery rates, production will slip, and that in turn will negatively impact both jobs, Federal revenue through lease sales, as well as the amount of revenue Louisiana has to rebuild its coastline.

This is exacerbated by the excess regulations that you noted and that Senator Vitter also noted. The estimates of the cost of these would be as much as $10–$30 million, in addition to the increased expenditures required under previously issued regulations. The industry estimates the 10-year cumulative cost of these rules to be approximately $32 billion.

In response to this problematic regulatory climate, I, along with Senator Vitter, drafted a bill that became Title 1 of the OPENS Act, legislation that was reported out of the Senate Energy and Natural Resources Committee last month. As from the title, the OPENS Act opens up more acreage for energy production offshore. For example, some would open up the Eastern Gulf of Mexico by redefining the Eastern Gulf moratoria of 2017.

In addition to expanding energy supply, according to a 2014 study, by 2035, Eastern Gulf offshore natural gas development would produce nearly 1 million barrels of oil equivalent per day,

generating nearly 230,000 jobs, contributing over $18 billion per year to the U.S. economy, and generating $70 billion in cumulative government revenue.

So, to conclude, the rise in production in the Gulf of Mexico is occurring due to large reserves and production efficiencies that streamline operational drilling costs. Although the long lead time and significant capital investment required to drill somewhat insulates production activity from short-term price volatility, the Obama administration's offshore drilling plan and proposed regulations could erode the economic viability of future well production in the Gulf of Mexico.

We must provide a regulatory environment to produce offshore oil and gas in a safe, economical way, while allowing access to the large undiscovered, technically recoverable oil and gas revenues on the Federal lands offshore. It is critical that production continue to grow in the Gulf of Mexico to protect and sustain our energy independence and to create the good jobs with good benefits for which there are far too few in today's economy.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Cassidy follows:]

PREPARED STATEMENT OF THE HON. BILL CASSIDY, A UNITED STATES SENATOR FROM THE STATE OF LOUISIANA

Thank you Chairman Bishop and members of the House Natural Resources Committee for holding this field hearing today in Louisiana and bringing greater attention to the energy production and economic growth occurring along the Gulf Coast.

Energy activities in coastal Gulf states and adjacent offshore waters have produced billions of barrels of oil and trillions of cubic feet of natural gas.

Domestic energy production is critical for our country's energy independence and security. Every barrel of oil and every cubic foot of natural gas produced in the Gulf of Mexico eliminates the need for energy from foreign sources. According to the Energy Information Administration, about 27 percent of U.S. oil is imported.

Unfortunately, the actions and policies of this Administration are counterproductive.

I. REDIRECTION OF COASTAL RESTORATION FUNDS

A few weeks ago, President Obama visited New Orleans to commemorate the region's rebirth on the 10th anniversary of Hurricanes Katrina and Rita. Yet, the sustainability of Louisiana's recovery was placed in jeopardy by the President's Fiscal Year 2016 budget proposal. His budget proposed to redirect revenue derived from energy produced off of Louisiana's coast toward unrelated projects. This money, as prescribed by Louisiana's State Constitution, would be used to restore Louisiana's wetlands.

Louisiana is experiencing unparalleled land loss due to Federal engineering decisions for nearly a century that have channeled the lower Mississippi River System for the benefit of the entire country. Louisiana's 2,300 square miles of land loss is largely attributed to this channelization, which abetted by the placement of Federal levees along the river system, has converted a once-growing delta plain to the greatest source of wetlands loss in the history of the United States.

Louisiana is counting on the revenues derived from offshore energy production to fund a portion of the projects necessary to restore our coast. This is important not just for Louisiana but also for the Nation. Close to 18 percent of U.S. oil production and about 24 percent of U.S. natural gas production originates, is transported through, or is processed in Louisiana's coastal wetlands.

Over 500 million tons of waterborne cargo passes through Louisiana's system of deep-draft ports and navigational channels each year. If present land loss rates continue, more than 155 miles of waterways and several of the ports will be exposed to open water within 50 years. Farmers and manufacturers in the Mississippi, Missouri, and Ohio valley will lose ability to get their products exported to international markets as this occurs.

Related to this, if Louisiana and the Nation depends upon revenue from production in the Gulf to restore our wetlands, a second way the Obama administration's policies negatively affects the revenue stream is by locking up OCS acreage which could be leased. America cannot afford policies that put our wetlands, economic and energy infrastructure at risk.

Under this Administration, less than 2 percent of the 1.71 billion Federal OCS acreage is under lease. Over 63 million acres in the Gulf of Mexico, alone, remains locked up. This lost opportunity results in fewer jobs, less government revenue, and a greater reliance on foreign sources of oil.

If the Draft Proposed Plan for offshore production is finalized in 2016, the Obama administration will have effectively controlled a decade of offshore oil and gas lease planning. The draft 5-year plan for 2017–2022 lists 14 lease sales—the lowest number of lease sales in the 42-year history of the planning process.

II. SUPPLY CONSTRAINTS (ACCESS)

Despite this headwind, counter-cyclical growth is occurring along the Gulf Coast. According to the Energy Information Administration, in the short term, the Gulf of Mexico is expected to defy the overall trend and increase production in the lower oil price environment, but if oil prices remain depressed for an extended period, the long-term outlook of the region changes drastically.

Development of offshore fields requires both surface and subsea production equipment. The high cost of surface structures limits their application to large fields.

Now, the Obama administration is proposing complex rules that will increase the cost of development and erode away the economic viability of well production, which combined with depressed oil prices, will further hamper future production in the Gulf of Mexico.

III. EXCESS REGULATION

As an example, drilling in the Gulf of Mexico may shut down for over 12 months until all requirements are met. The Well Control Rule could drive up the cost per well by $10–$30 million. Industry studies estimate that the 10-year cumulative cost of the rule to be approximately $32 billion.

In response to this problematic regulatory climate, I, along with Senator Vitter, drafted a bill that became Title 1 of the OPENS Act—legislation that was reported out of the Senate Energy and Natural Resources Committee last month. As one could tell from its title, the OPENS Act opens up acreage for energy production offshore.

Our portion of the bill provides new access to frontier acreage in the Gulf of Mexico in areas 50 miles outside the Florida coastline by redefining the Eastern Gulf moratoria in 2017. According to current law, the moratoria is scheduled to expire in 2022.

In addition to expanding energy supply, according to a 2014 economic study (http://www.noia.org), by 2035, Eastern Gulf offshore oil and natural gas development could produce nearly 1 million barrels of oil equivalent per day, generate nearly *230,000 jobs*, contribute over $18 billion per year to the U.S. economy, and *generate $70 billion in cumulative government revenue*.

So to conclude, the rise in production in Gulf of Mexico is only occurring due to large reserves and production efficiencies that streamline operation and drilling costs. Although, the long lead time and significant capital investment required to drill helps insulate production activity from short-term price volatility.

The Obama administration's lackluster offshore drilling plan and proposed regulations could erode away the economic viability of future well production in the Gulf of Mexico. We must provide a regulatory climate to produce offshore in a safe, economical manner, while allowing access to the largest undiscovered, technically recoverable oil and gas resources on Federal lands offshore in the Gulf of Mexico. It is critical that production continues to grow in the Gulf of Mexico in order to protect and sustain our American energy independence and to help create good jobs with good benefits, of which there are too few of in today's economy.

The CHAIRMAN. Thank you.

I thank both of you for being here and for giving us your testimony. I realize the two branches of the Congress, each have different schedules, so the longer you can stay with us, I would be

happy to welcome you here to be a part of this panel. But with Chairman Fleming and Congressman Graves, your state is well represented on our committee anyway.

Once again, we appreciate your testimony. We appreciate working with you on the wrong side of the Capitol Building. Thank you for being here.

With that, I will now call the second panel up who will be here to testify.

I would like to call Mr. Lars Herbst, who is the Regional Director, Gulf of Mexico OCS Region for the Bureau of Safety and Environmental Enforcement, the U.S. Department of the Interior to join us.

Can we also have Mr.—actually, why don't we switch those around? Let's have Mr. Leimkuhler being the second one, who is the Vice President of Drilling, LLOG Exploration Company; then Mr. Jonathan Henderson, who is the Manager of the Gulf of Mexico Field Operations for the Gulf Restoration Network; Ms. Lori Davis, who is the President of RIG-CHEM; and also Dr. Joseph Mason, who is the Endowed Professor of Banking at Louisiana State University.

If we could have you take your places up there. We appreciate your willingness to come and speak to us about this important issue, as we are very happy to be here in New Orleans.

Let me remind the witnesses that under our Committee Rules, you are limited in your oral testimony to just 5 minutes, but your entire statement and anything you actually have that you want printed and added to the record will be included in the hearing record.

So, to help out, you have the timer in front of you. As you begin speaking, the green light is there. The yellow light goes on when you have a minute left. The red light comes on when your 5 minutes have ended. Obey that red light, if you would, please.

Once again, we appreciate you taking the time to be with us here today.

Mr. Herbst, I would like to recognize you first to begin your 5-minute testimony.

STATEMENT OF LARS HERBST, REGIONAL DIRECTOR, GULF OF MEXICO OCS REGION, BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT, U.S. DEPARTMENT OF THE INTERIOR

Mr. HERBST. Thank you, Chairman Bishop and the Members present here. Thank you for the opportunity to appear today to present testimony.

My name is Lars Herbst. I am the Gulf of Mexico Regional Director for the Bureau of Safety and Environmental Enforcement. I am a native of Louisiana, a graduate of LSU Petroleum Engineering Program, and a registered professional engineer.

My public service began in 1983 in BSEE's predecessor agency, the MMS. I now lead a staff of 350 engineers, geologists, and environmental scientists committed to promoting safety, protecting the environment, and serving our Nation's offshore resources.

Over the past 4 years, the Bureau has made a significant effort to update its regulations to ensure safe and environmentally

responsible operations offshore. These updates reflect the latest technological advancements and recommendations resulting from the Macondo blowout. Sustained production and robust culture of safety are not mutually exclusive. By promoting safety and reducing risk offshore, we are helping to safeguard the long-term viability of production in the Gulf of Mexico.

In 2014, oil production in the Gulf region was at its highest level since the Macondo blowout. More than 510 million barrels of oil were produced, the third highest production since 2005. In 2016, the Bureau expects Gulf production to continue increasing, with several large projects expanding and other new projects coming on-line. The Bureau estimates nearly 1.7 million barrels of oil per day will be produced in the Gulf, bringing annual production to about 620 million barrels, the highest in a decade.

Keeping in mind that deepwater production projects often take 10 to 12 years from discovery to first oil, the production trends you see in Figure 1 are expected to increase in the years ahead as a number of projects are already sanctioned and well into advanced planning stages. We expect two to three large floating production projects and eight subsea tie-back projects to come on-line in 2016.

There is a tendency to focus on oil price trends and their effect on production levels. The market price of oil may affect permit numbers and rig counts in some areas of the United States, such as onshore and shallow water. However, deepwater production, which accounts for more than 75 percent of the offshore production, is less affected by short-term market fluctuations or new regulations.

Low oil prices often do not have a direct impact on deepwater exploration and development drilling. These prospects generally involve long-term rig contracts or development drilling of sanctioned projects. Likewise, in production, large facilities like Shell's Olympus or Chevron's Jack-St. Malo, are already on-line and remain economically viable. Therefore, assumptions about the connection between deepwater production and short-term market conditions should be avoided.

Even as rig activity in shallow water has decreased over the years, deepwater production remains high, as shown in Figure 2. Since the Macondo blowout in 2010, we have worked with Gulf Coast states and industry to mitigate consequences of blowouts by requiring immediate access to well containment systems. Now, almost 5 years later, we must ask ourselves: Has safety improved?

In some areas, it clearly has. Yet, a significant challenge still faces the Bureau with respect to blowout prevention. These issues are addressed by the Well Control Rule, which we are finalizing. It closes gaps in blowout preventive requirements to reflect industry's best practices, standards, and recommendations arising from the Macondo blowout investigations. The proposed rule helps to move the Bureau closer to a hybrid regulatory approach, both prescriptive and performance based, allowing for greater flexibility and a more holistic approach.

This week, the Bureau is meeting with key industry stakeholders to discuss their comments. We need the Well Control Rule as loss of well control instances are still occurring at the same frequency as before the Macondo blowout, as shown in Figure 3. One such

incident involved Walter Oil and Gas that occurred in 2013. There was a blowout of natural gas which subsequently caused a fire on the rig. Shortly after the blowout, all 44 workers safely evacuated. The fire lasted 72 hours and destroyed the rig, at a cost approaching $60 million. The situation could have been far worse, but fortunately this did not happen.

Our ability to successfully accomplish our mission depends heavily on recruiting and retaining qualified technical experts. Currently, we are the leading employer of students from LSU's Petroleum Engineering Department. Our mission is to safeguard the people and environment of our coastal states and ensure that all personnel make it safely home at the end of each shift.

It is my belief as a regulator that our Bureau's work, on behalf of the American people, is never finished. My commitment and duty is to remain vigilant and ensure that lessons learned from offshore incidents are integrated into our work to prevent similar incidents in the future. The Bureau will continue to work with the regulated community to promote best practices and support a robust culture of safety offshore.

This concludes my formal statement. I am happy to answer questions.

[The prepared statement of Mr. Herbst follows:]

PREPARED STATEMENT OF LARS HERBST, REGIONAL DIRECTOR, BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT

Chairman Bishop, Ranking Member Grijalva, and members of the committee, thank you for the opportunity to appear here today to discuss the impacts of Federal regulatory activity on oil and gas exploration and production on the Outer Continental Shelf (OCS) in the Gulf of Mexico.

Over the past several years, the Bureau of Safety and Environmental Enforcement (BSEE) has made a significant effort to update its regulations to reflect technological advancements, recommendations in response to the blowout of the Macondo well and resulting Deepwater Horizon disaster, and the challenges posed by exploratory activities on the Arctic OCS. These updates are a critical part of our efforts to ensure safe and environmentally responsible operations offshore and our recent rulemaking activities constitute a substantial step toward safe and sustainable exploration and production of Gulf of Mexico oil and gas resources. Safe and responsible exploration remains our top priority. By doing things safely and ensuring that incidents do not cause significant damage to the entire region, we are helping to safeguard the long-term viability of production in the Gulf of Mexico. Sustained production and a robust culture of safety are not mutually exclusive.

In calendar year 2014, OCS leases in California, Alaska, and the Gulf of Mexico provided 528 million barrels of oil and 1.3 trillion cubic feet of natural gas; the vast majority of this production came from the Gulf of Mexico. In 2014, oil production in the Gulf of Mexico region was at its highest level since the Macondo blowout. Over 510 million barrels of oil were produced from the Gulf of Mexico in 2014, making this the third highest production year in the span of 2005–2014. Even with the expansion and strengthening of offshore oil and gas regulations prompted by the Macondo blowout, the 10-year average production rate has increased annually since 2005 (see Figure 1). Since 2010, OCS leases have provided nearly 2 billion barrels of oil and 6.2 trillion cubic feet of natural gas, fueling economic growth and accounting for more than 19 percent of the Nation's oil production and about 5 percent of domestic natural gas production. BSEE will continue to support domestic energy production from the Nation's offshore resources, while actively working to reduce risk in order to ensure safe and environmentally responsible operations on the OCS.

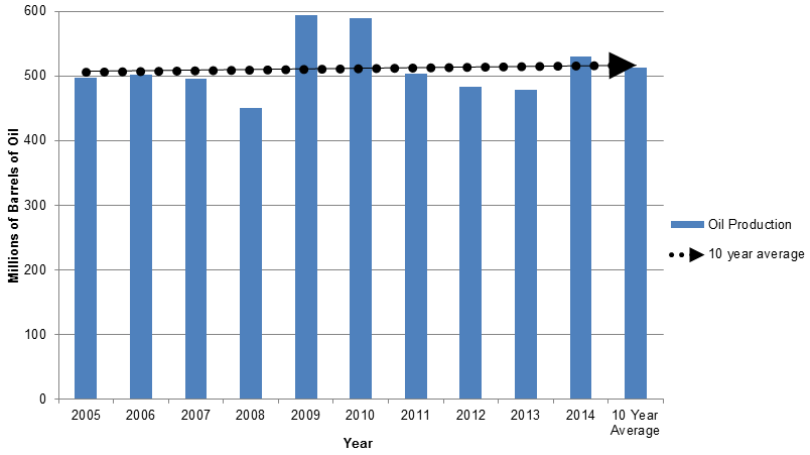


Figure 1—Total Oil Production for the U.S. Outer Continental Shelf 2005–2014

In 2016, BSEE expects production in the Gulf of Mexico to continue increasing, with several large projects expanding and other new projects coming on-line. The Shell-operated Olympus facility is one example of project expansion. When production began in 2014, it produced 35,000 barrels of oil per day (BOPD). By 2016, production is expected to increase to 80,000 BOPD. Another example is Anadarko's Lucius field which reported first oil production on January 19, 2015 and quickly ramped up to 80,000 BOPD in the second quarter of 2015. Lucius is also processing gas for subsea wells operated by ExxonMobil's Hadrian South subsea project which reported first production on March 30, 2015 with production estimated to ramp up to 300 million cubic feet of gas per day (MMcfpd) and 3,000 barrels of liquid (condensate). The Bureau estimates that in 2016 nearly 1.7 million barrels of oil per day will be produced from the Gulf of Mexico alone, putting annual oil production near 620 million barrels per year—110 million barrels higher than in 2014, and the highest rate in 10 years.

A deepwater floating production project often takes approximately 10 to 12 years to come on-line from discovery to first oil. As such, BSEE evaluates information provided by operators many years in advance of new production coming on-line. The production trends you see in Figure 1 are expected to increase in the years ahead as a number of projects are already sanctioned and well into the advanced planning stages. We expect two to three large floating production projects and eight subsea tie-back projects to come on-line in 2016 and start first production. In fact, BSEE just last week completed a pre-production inspection of the Heidelberg production SPAR that will be operated by Anadarko and is expected to begin production in 2016. You can view photos from the production and inspection on our Flickr® Web site (https://www.flickr.com/photos/bseegov/).

There is a tendency to focus on overall trends in energy commodity prices—such as the price of oil—and to try to tie those trends to current production levels. Oil prices and market expectations about future prices have varying degrees of impact on permitting demands and production levels in different areas. For example, permit requests and rig counts in some areas of the United States can be affected significantly by sharp changes in oil prices. However, deepwater production, which accounts for over 75 percent of OCS production, is not affected in the same way by short-term market fluctuations or other policy drivers. Deepwater prospects are planned and sanctioned many years in advance and involve long-term rig contracts to allow the operator to drill within the lease term. The same concept applies to production. Large production facilities, like Shell's Olympus or Chevron's Jack-St. Malo, are already on-line and remain economically viable to produce for a long period of time (years) even when oil prices are lower for a period of time. Therefore, assumptions about the interconnectivity of deepwater production and short-term market conditions should be avoided. Even as the number of wells has decreased, production has remained high due to technological advancements (see Figure 2).

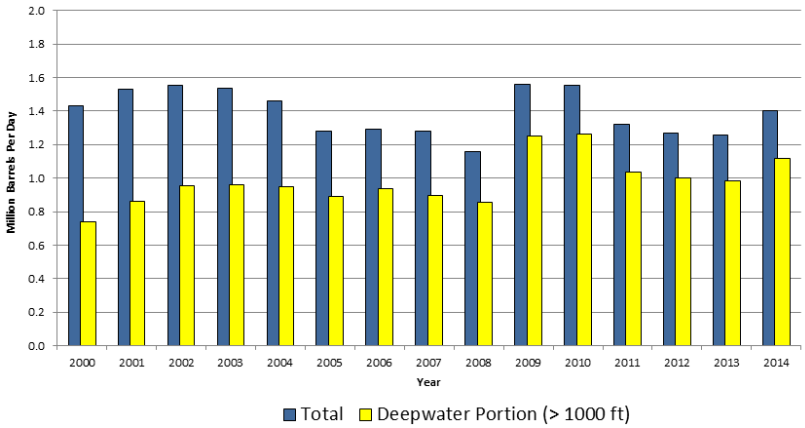


Figure 2—Gulf of Mexico Outer Continental Shelf Oil Production, Total vs. Deepwater (Numbers Reflect Average Daily Oil Production)

Immediately following the Deepwater Horizon disaster, the Department of the Interior and BSEE issued a series of regulations and notices to improve safety offshore. Former BSEE Director Michael Bromwich discussed the importance of safety and change before the House Committee on Natural Resources in March 2011:

> "Regulatory and industry reform in the wake of significant offshore disaster has happened before. The United Kingdom and Norway substantially changed their oversight of offshore drilling and production following the Piper Alpha and Alexander Kielland incidents respectively. Australia is currently facing many of the same issues we are confronting following the Montara well blowout, which occurred only 8 months before the Deepwater Horizon disaster . . . .
>
> The major challenge facing the country is to continue to improve the safety of drilling in the GOM, particularly in deepwater, while continuing with operations, keeping production flowing and keeping people working."[1]

Nearly 5 years have passed since former Director Bromwich's remarks and his points are as relevant today as they were then, which is why we must continue to ask whether the fundamental changes discussed have occurred. In some areas, they have. BSEE discusses these changes at length in its Annual Report. Federal regulators, state governments, and the oil and gas industry have worked together to make significant strides in mitigating the consequences of blowouts by implementing requirements for immediate access to containment systems. However, the most significant challenge facing the agency is to make similar strides in prevention, which includes blowout prevention and well control. BSEE and industry worked tirelessly to develop the well containment screening tool which, along with the development of new well containment equipment, allowed drilling to resume after the Deepwater Horizon tragedy. These issues we addressed in the proposed rule entitled Blowout Preventer Systems and Well Control, which was published on April 17, 2015 (74 FR 21504).

Understanding the importance of reforming well control practices, BSEE is reviewing public comments and developing the final rule. This rule closes gaps in blowout preventer requirements and updates BSEE regulations to reflect industry best practices. The proposed rule also incorporates the latest industry standards as well as recommendations that resulted from investigations into the Macondo blowout, the resulting fire and loss of life onboard the Deepwater Horizon, and the environmental disaster that followed. Specifically, the proposed rule includes provisions that increase requirements for equipment reliability and build upon industry standards for blowout preventers. In a comprehensive way, the proposed rule addresses the multiple systems and processes critical to well control operations. The proposed rule includes more stringent design requirements for critical well control safety

[1] Bromwich, Michael. Statement to House Natural Resource Committee, March 30, 2011.

system equipment and requirements concerning the generation of traceable records regarding the manufacture, use, maintenance, and decommissioning of blowout preventers and other well control equipment. The proposed rule helps to move BSEE closer to a hybrid regulatory approach—one that is both prescriptive and performance-based. A hybrid approach grants BSEE greater flexibility and allows for a more holistic approach to regulation. The comment period on the proposed rule has closed and BSEE is currently meeting with key stakeholders and industry leaders—which started yesterday and continues today—to discuss their comments. As with all new rule adoption, BSEE employs a robust process of public engagement and considers all comments and feedback.

The necessity of the Well Control Rule is demonstrated by the fact that the number of loss of well control incidents has increased in the last 2 years and thus, these incidents are still occurring with a frequency that is comparable to that which existed prior to the Macondo blowout. Six of the last seven investigations completed by BSEE for loss of well control incidents found that the root cause of each incident was tied to equipment difficulties, in particular the design specifications of wells. Figure 3 shows the continued occurrence of loss of well control incidents on Gulf of Mexico facilities (see Figure 3). The proposed Well Control Rule addresses these issues.

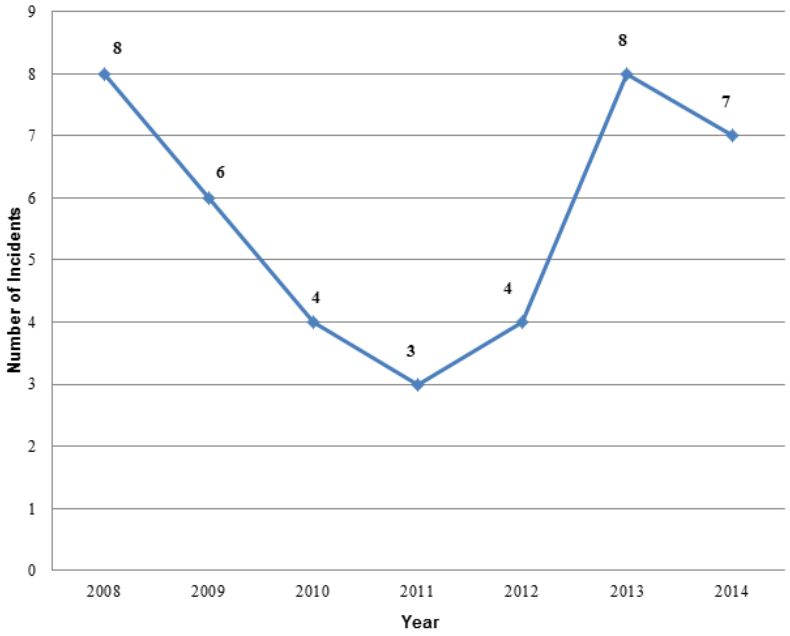


Figure 3—Losses of Well Control Incidents in the Gulf of Mexico from 2008–2014

New regulations are designed to prevent blowouts like the Walter Oil and Gas incident that occurred in 2013 when a blowout and explosion caused a fire on the rig. All 44 workers were safely evacuated, but the fire lasted over 72 hours and the rig was completely destroyed, resulting in a financial loss approaching $60 million. Blowouts like these can easily lead to much larger incidents that pose a significant risk to human life and can cause serious damage to the environment. The Incident Report published about the Walter blowout discusses numerous points where things could have gone tragically wrong. Fortunately, this did not happen, but the risk remains high in the region. By strengthening oversight and encouraging a culture of safety within the industry, BSEE is helping safeguard the long-term viability of drilling in the Gulf of Mexico.

Well control is not the only area in which BSEE has proposed significant improvements. Another major area of safety reform includes an update to our production

safety systems regulations.[2] The section of BSEE's regulations related to production safety systems has not been updated since 1988 and significant technological advancements have been made in that time. The proposed regulation addresses production safety systems, subsurface safety devices, and provides specification for safety device testing. BSEE is currently working to finalize this rule.

As noted in BSEE's 2014 Annual Report,[3] there continue to be issues related to aviation as well as crane safety. BSEE has issued an Advanced Notice of Proposed Rulemaking for Helideck and Aviation Fuel Safety for Fixed Offshore Facilities.[4] Public comments have been received and we will be reviewing them.

Lifting incidents involving cranes or personnel and material handling operations are increasing. From 2007 to 2014, the average number of lifting incidents reported per year was 167. While the lowest number of incidents was reported in 2010, incidents have increased since then (see Figure 4). BSEE is currently working to finalize a Crane Safety Rule[5] to reduce lifting incidents based on the increased number of lifting incidents observed on the OCS.

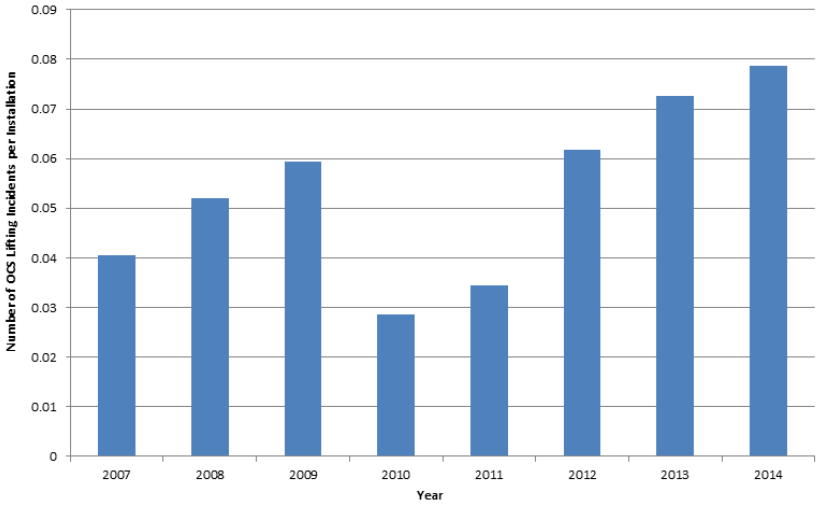


Figure 4—Lifting Incidents per Outer Continental Shelf Installation from 2007–2014

We are also working to strengthen our offshore oversight by considering the use of real-time monitoring technologies and voluntary near-miss reporting to improve and increase the regulatory oversight of critical offshore operations and equipment. The real-time monitoring program is intended to enhance the existing inspection and enforcement program by using innovative technologies and risk-based inspection criteria to supplement BSEE's current inspection program. The voluntary near-miss reporting system, SafeOCS, was formally launched in May 2015. It is a completely confidential system whereby the Bureau of Transportation Statistics collects and aggregates data on behalf of BSEE. The aggregated data will be shared with the general public through the BTS Web site and be used to identify safety trends and increase the understanding of offshore risk. When used in conjunction with existing methods of collecting data and assessing risk, this amalgamated data can be used to identify trends that will help to reduce the risk of major incidents, loss of life, injury and negative impacts on the environment.

---

[2] Proposed Rule: Oil and Gas and Sulphur Operations on the Outer Continental Shelf—Oil and Gas and Production Safety Systems. Published on Thursday, August 22, 2013 (78 FR 52240).

[3] BSEE Annual Report 2014—http://www.bsee.gov/uploadedFiles/BSEE/BSEE_Newsroom/Publications_Library/Annual_Report/BSEE%202014%20Annual%20Report.pdf.

[4] Advance Notice of Proposed Rulemaking: Oil and Gas and Sulphur Operations in the Outer Continental Shelf (OCS); Helideck and Aviation Fuel Safety for Fixed Offshore Facilities. Published on Wednesday, September 24, 2014 (79 FR 57008).

[5] Proposed Rule: Oil and Gas and Sulphur Operations in the Outer Continental Shelf—Update of Incorporated Cranes Standard. Published on Monday, June 15, 2015 (80 FR 34113).

Our people continue to be our greatest asset and the most essential component of our operations. BSEE's ability to successfully accomplish its mission depends heavily on our ability to recruit and retain a workforce of qualified technical experts. Currently, BSEE is the No. 1 employer of students from Louisiana State University's Petroleum Engineering program—both as summer interns and as full-time employees. We are proud of our local connections and have found that our message of safety and responsible exploration resonates with young petroleum engineers from the state of Louisiana. These engineers, like BSEE, are interested in helping safeguard the people of their state and ensure that future blowouts do not catastrophically impact the region and their homes. At the end of the day, our mission is to safeguard the people and the environment of our coastal states and ensure that all offshore personnel make it safely home at the end of each shift.

It is our belief that our work as regulators—on behalf of the American people—is never finished. As our commitment and duty to the American people, we will remain vigilant in instituting reform efforts and benefiting from lessons learned from activities and incidents on the OCS. We will continue to work cooperatively with the regulated community to promote best practices and to support a robust culture of safety within the offshore oil and gas industry, which produces these resources that are so valuable and essential to our economy.

This concludes my formal statement, and I am happy to answer any questions you have about the proposed rules or the current state of BSEE's regulation and oversight of oil and gas operations in the Gulf of Mexico.

QUESTIONS SUBMITTED FOR THE RECORD TO LARS HERBST, REGIONAL DIRECTOR, BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT

Questions Submitted by Chairman Bishop

Question 1. The committee is concerned that this extremely technical and prescriptive rule was written without a complete understanding of modern drilling practices. As a result, there are multiple provisions in the draft rule that many in the industry would argue are technically flawed and would actually make drilling operations offshore less safe. In-depth conversations and workshops with industry experts in this very technical field are necessary to create a rule that meets everyone's goal of a safer offshore environment, while also maintaining the ability to efficiently produce oil and natural gas.

Answer. BSEE disagrees with the assertion that the Well Control Rule is flawed. The proposed rule contains a variety of prescriptive and performance-based requirements and adopts 10 current industry standards that pertain to well control. The rule was also drafted to address recommendations from numerous investigations and reports issued following the Deepwater Horizon disaster by the following entities:

- Department of the Interior (DOI)/Department of Homeland Security (DHS) Joint Investigation Team (JIT)
- National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling
- Chief Counsel for National Commission
- National Academy of Engineering
- BSEE Blowout Preventer (BOP) Forum
- Ocean Energy Safety Advisory Committee
- Chemical Safety Board

Additionally, the rule addresses issues arising out of recent blowouts in the Gulf of Mexico and other "near miss" events and incorporates many provisions that have been longstanding Gulf of Mexico policy. The Bureau has engaged industry, non-governmental organizations, and other stakeholders throughout the rulemaking process and has provided opportunities for those entities to voice questions, concerns, and other input. The Bureau is currently working to address industry's questions and concerns and giving careful consideration to comments that could improve the quality of the rule.

Question 1a. Who wrote the Well Control Rule? And what were the qualifications and experience of these people? Please list BSEE staff and outside consultants who contributed to the writing of the rule, as well as their relevant experience.

Answer. Subject matter experts from the entire organization—some having more than 30 years of industry related experience—helped draft the proposed rule, including staff from the program offices as well as the field offices. To supplement BSEE's in-house expertise, BSEE held a public workshop, listening sessions, and over 50 meetings with industry, trade associations, regulators, and other stakeholders to obtain technical input. The proposed rule is also informed by the several investigations conducted after Deepwater Horizon, which utilized the expertise of many acclaimed engineers, scientists, and other highly qualified professionals.

Question 1b. When and how do you plan to further engage industry technical experts in order to correct technical flaws and create a rule that meets the intended goal of a safer offshore environment?

Answer. BSEE disagrees that the proposed regulation is flawed. As mentioned in the hearing, BSEE held follow-up meetings for 2 days with entities that submitted comments during the comment period to obtain additional clarification on comments that addressed specific provisions of the rule. These meetings were held on September 15 and 16. Additionally, stakeholders will have the opportunity for further engagement during listening sessions that will be held after the rule is sent to the Office of Management and Budget for interagency review under E.O. 12866.

Question 1c. What is the Bureau's rationale for including additional provisions beyond API 53 pertaining to Blowout Prevention Equipment Systems?

Answer. The API process results in the development of baseline performance standards based on the consensus process. This process often requires compromises to address domestic and international technical and legal issues from various sectors of the industry. BSEE staff members attended many of these meetings and discussions and were able to identify the provisions that potentially did not provide a sufficient level of safety for U.S. offshore operations. For the proposed rule, BSEE requested comments on these supplemental requirements and will consider any data or recommendations provided by industry or third parties.

Question 2. In the hearing you mentioned that if companies commented on the rule, they were invited back for meetings with appropriate BSEE staff. Has BSEE reached out to all companies that have submitted comments? What is BSEE's plan to continue to engage industry on these technical matters? When will the next round of meetings take place? Has BSEE considered holding workshops to gain further information and technical expertise in a setting that allows sufficient time and discussion to help improve the rule before it is finalized?

Answer. Bureau staff are working to finalize the rule based on comments submitted during the comment period. BSEE staff members have worked to ensure broad stakeholder engagement throughout the drafting process. As mentioned in the hearing, BSEE held additional follow-up meetings with parties that had commented on the rule to provide Bureau staff with clarification on these comments. However, not all commenters participated in follow-up meetings, as a majority of comments submitted were very clear and required no further explanation or clarification. We do not feel that further engagement is required at this time based on the input that BSEE received during the drafting process, the public comment period, and the follow-up meetings with commenters.

Question 3. In many comments submitted, companies stated the proposed rule contains provisions, specifically in regards to drilling margins as mentioned by Mr. Leimkuhler during the hearing that could potentially undermine the safety mission through unintended consequences. Do you believe the proposed rule contains such provisions and what evaluations have been conducted by BSEE's technical staff to ensure safe operating procedures?

Answer. The Bureau does not agree that the proposed rule undermines safety. The language related to drilling margins is based on recommendations arising out of the various investigations and reports that followed the Deepwater Horizon tragedy. The Bureau received a multitude of comments on the sections of the rule that pertain to safe drilling margins and is examining those comments. Specific comments related to drilling margins are being reviewed carefully by BSEE technical staff and other options for maintaining safe drilling margins are being evaluated.

Question 4. The comment period for the Well Control Rule closed in July. What is the timing for the Department moving forward? When do you anticipate it will be finalized? Is there a deadline either internally or externally by which the Department must meet?

Answer. The Bureau is giving thoughtful consideration to all input that was received during the comment period. BSEE is moving forward with the rule in a timely manner and, once this process is completed, will proceed to issuance of the rule.

Question 5. A study commissioned by the American Petroleum Institute and referenced in their public comments on the Well Control Rule estimated that the rule will cost approximately $32 billion which is significantly higher than the $883 million cost estimated by BSEE. Can you please explain how BSEE staff arrived at that figure and why it is so profoundly different than the independent analysis conducted by Blade Energy Partners and Quest Offshore?

Answer. BSEE arrived at its cost estimate by employing a careful section-by-section analysis of the rule to identify provisions that would result in compliance costs outside of those already incurred by industry in conforming to the latest industry standards. BSEE disagrees with many of the key assumptions made in the American Petroleum Institute (API) study, which are the foundation for the higher cost estimate of that report. Specifically, the API cost study accounts for lost drilling activity due to the effects of the regulations pertaining to drilling margins, which is the major cost-driver in the API study. The BSEE economic analysis does not account for decreases in drilling activity due to the uncertainty associated with predicting industry's activities and advancements in technical capabilities and the ability of operators to apply for alternative compliance. The API study also does not include in its analysis the many benefits of the rule, including reduced fatalities, reductions in the likelihood of oil spills, and the significant cost savings arising out of reduced testing of equipment.

Question 6. There are some who suggest that some of the equipment requirements in the draft rule will require sizable changes to existing infrastructure with little to no impact on increasing the efficacy or ability for that equipment to operate effectively. As Murphy Oil Company noted in their comments, "the lack of availability of upgrade equipment and the time estimated to manufacture and install the same will result in a shutdown of the majority of the Gulf of Mexico rig fleet for a substantial period of time." How do you respond to those assertions?

Answer. The implementation periods for various aspects of the rule are being analyzed based on the comments received. The proposed rule employs a phased implementation schedule that delays the effective dates of certain requirements. By phasing in certain requirements over time, the rule will not have the effect of shutting down the Gulf of Mexico rig fleet.

Questions Submitted by Rep. Fleming

Question 1. When discussing BSEE's engagement and how BSEE can put forward regulations that don't cause a reduction in production, you stated, "if we can accomplish the same objective by another means which industry has brought up I think there will be flexibility." How is BSEE pursuing these alternatives and the flexibility you mentioned during the hearing?

Answer. Each comment is analyzed to determine if the suggestion provides an equal or better level of safety than the proposed rule language. If it does, the rule may be modified. Furthermore, alternative compliance is allowed under the alternative compliance section of the existing rules, and would continue to be allowed under the proposed rule.

Question 2. When discussing the drilling margin issue you mentioned that BSEE often incorporates industry standards as part of BSEE regulations. How have you fully taken into account industry standards (such as API 92–L)?

Answer. BSEE is taking API 92–L into consideration; however, this standard was drafted after the proposed rule went out. We are reviewing comments related to the drilling margin issue and considering whether or not the rule should require compliance with an industry standard or allow for performance-based assessment.

Question 3. During the hearing Mr. Leimkuhler identified examples of the proposed rulemaking that may make drilling operations less safe by diverging from industry standards, such as the requirement for a 5-year demonstration of the blowout preventer. Are you taking into account real-world feedback on safety

implications of your proposals? Are you willing to modify the rule to account for this feedback?

Answer. BSEE is taking into consideration all feedback received pursuant to the rulemaking process. The 5-year inspection of the blowout preventer is currently contained within API Standard 53. In this case, we proposed to adopt an industry recommended standard. The comments received during the comment period as well as the input received from BSEE's various outreach activities constitute "real-world feedback." BSEE is considering input from all sources and will modify the rule in response to comments where doing so will improve the quality of the rule.

Questions Submitted by Rep. Garret Graves

Question 1. BSEE is proposing new requirements for accumulator volumes, beyond those of industry standards, which will require additions to and reconfiguration of the BOP. Accommodating these new requirements will add to the complexity of the BOP system and could have an impact on the safety and functionality of the BOP. Has BSEE looked at the safety implications that might result from this increased accumulator volume on the other safety mechanisms contained within the BOP? If so, please provide the analysis? If not, please explain why not?

Answer. This section did receive considerable comment. BSEE is still in the deliberative stages of the rulemaking process and evaluating the comments received to ensure that safety-critical functions have proper accumulator volumes to ensure actuation.

Question 2. How did BSEE come to the decision that the proposed rule's quinquennial inspection scheme will produce a result superior to that which will result from adherence to a sequential application of the periodic maintenance and inspection requirements of API 53? Can BSEE point to any safety data that supports its decision?

Answer. BSEE believes that the proposed language will result in a comprehensive and traceable inspection scheme. The lack of an industry-wide database related to equipment reliability has made assessing the effectiveness of current inspection schemes difficult. BSEE will review the information and data received during the comment period before making any decisions.

Question 3. In the Well Control Rule, BSEE Approved Verification Organizations (BAVOs) will be charged with interpretation of the BSEE regulations, such industry standards as are incorporated by reference, and recognized engineering practices. However, no indication is given as to how BSEE would provide the BAVOs with the guidance and oversight necessary for rendering such interpretations. Just as there is a need for consistency among BSEE Regional and District offices, there will be a need for consistency among BAVOs. How does BSEE plan to ensure there is a transparent system for provision of interpretations as needed?

Answer. BSEE has initiated a formal process for issuing interpretations on regulations that will help to ensure consistent application of the requirements across the agency, industry, and third-party verification organizations. BSEE will also certify that BSEE-approved verification organizations (BAVO) have previous experience with BSEE requirements and procedures as well as the technical expertise to perform verifications based on the regulations as written.

Continued Engagement

Question 4. During the hearing I asked you why interested parties were only provided a total of 3 months (initial 2 months with a 1 month extension) to comment on a proposal that BSEE took several years to write and you explained that that decision was outside your call but that BSEE is still working with industry. You also mentioned that with the proposed provisions outside of the codification of industry standards that BSEE is "continuing to work with those commenters." As I also stated at the hearing, I'm very concerned that this rule is done right, which is why I am particularly concerned that this technical engagement continues and I asked BSEE to commit to public meetings so we can get this rule right. Please explain how BSEE will continue its engagement with industry through the end of the year.

Answer. BSEE staff are working to finalize the rule and to address the over 5,000 pages of comments submitted during the comment period. BSEE staff have worked to ensure broad stakeholder engagement throughout the drafting and comment process. The Bureau conducted over 50 meetings with various companies, trade

associations, regulators, and other stakeholders during the open comment period as part of the process of moving from proposed to final rule. The Bureau also met with organizations after the closure of the comment period in those cases where the Bureau required clarification of the written comments that were submitted within the comment period. Those discussions were restricted to the substance of those timely submitted comments. We do not feel that additional technical engagement is required at this time, based on the input that BSEE received during the drafting process and in the public comment period. The Bureau is currently working to address industry's questions and concerns and giving careful consideration to comments that could improve the quality of the rule.

Our current regulations do not account for the more than 160 recommendations that the Bureau received following the tragic events of the Deepwater Horizon disaster or reflect lessons learned from other loss of well control events that occurred thereafter. It took several years for the studies and investigations to be concluded. The proposed Well Control Rule incorporates the findings of those studies and investigations.

BSEE Regional Office Expertise

Question 5. To what extent have you and your staff been involved in the development of new regulations by BSEE headquarters and to what extent were you involved in the development of the proposed Well Control Rule?

Answer. We utilize the collective experience of all of our BSEE subject matter experts, regardless of their location, for any new rule or regulation that is being developed and finalized. GOM Regional Office staff have been thoroughly involved throughout the entire process, including drafting the rule, reviewing technical comments from industry, and meeting with commenters at BSEE Headquarters in Washington, DC.

Question 6. Please describe the amount of input that headquarters requested from the Gulf Region on offshore regulatory matters, and please describe if and how much this has changed since 2010.

Answer. BSEE regulations are developed by subject matter experts throughout the Bureau, regardless of their being in a regional or headquarters location. We utilize the collective expertise of a range of experts to develop regulations. Subject matter teams were specifically engaged to assess the technical comments that were received. The GOM Regional Office was thoroughly involved in drafting the proposed rule and was a part of the subject matter expert team assembled to review technical comments from industry. Content development and participation in each rule is different based on the topic and expertise needed for each individual rule.

Question 7. Is it safer for drilling decisions to be made by the drilling personnel on the rig or offshore facility or by onshore based personnel?

Answer. All urgent decisions related to safety should be made by qualified competent personnel on the rig. However, real-time monitoring can elevate safety by having a "second set of eyes" to catch something that one person may miss. The proposed rule would not change current industry or operator practices regarding decisionmaking.

Questions Submitted by Rep. Westerman

Question 1. BSEE's pending well control regulation has been under consideration within the Department of Interior for over 4 years. The scope of this Federal rule has expanded over the years from a focus on blowout preventer systems to the broader issue of well control. In the Agency's own words, this regulation represents "one of the most substantial rulemakings in the history of the BSEE and its predecessor organizations." Given the extremely technical nature of this regulation, there is a limited number of industry experts who fully understand the consequences and feasibility of many provisions included in the rulemaking.

Question 1a. Who did the Bureau consult with during the drafting of this rule?

Answer. We utilize the collective experience of our BSEE subject matter experts—which includes engineers with over 30 years of industry experience—for any new rule or regulation that is being developed and finalized. BSEE also held over 50 meetings with external stakeholders including technical experts, industry groups, academia, and the members of the regulated industry. The rule also incorporates

technical recommendations from numerous investigations and reports issued following the Deepwater Horizon incident including:

- Department of the Interior (DOI)/Department of Homeland Security (DHS) Joint Investigation Team (JIT)
- National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling
- Chief Counsel for National Commission
- National Academy of Engineering
- BSEE Blowout Preventer (BOP) Forum
- Ocean Energy Safety Advisory Committee
- Chemical Safety Board

Question 1b. More specifically, within BSEE, who was tasked with writing the technical provisions of this rule?

Answer. The rule was developed by BSEE subject matter experts throughout the Bureau from both regional and headquarters locations. We utilize the collective expertise of a range of experts to develop regulations. Subject matter teams were specifically re-engaged for assessment of technical comments that were received.

Question 1c. Were outside consultants and/or drilling engineers familiar with the latest technologies and drilling processes involved in drafting the rule?

Answer. The Bureau has engaged extensively with external stakeholders and technical experts, beginning as early as 2012 with the blowout preventer public workshop. Additional sessions were held following that workshop with members of the regulated community, including the American Petroleum Institute and many of its members. Since then, engagement has continued with numerous meetings (over 50) with industry, academia, and other technical experts prior to publishing the rule. More recently, additional meetings were held after the closure of the comment period in cases where the Bureau required clarification of the written comments that were submitted within the comment period. Those discussions were restricted to the substance of those timely submitted comments. Since we have held many meetings and a public workshop in the past 4 years, we do not feel that there have been any time constraints placed on our stakeholder engagement.

Question 1d. I am concerned that a regulation this technical—with significant safety, production, and cost impacts—may not have been exposed to the level of engineering expertise necessary to draft the best possible, and technically feasible, rule.

Answer. The provisions in the rule have been fully discussed and carefully considered. We utilize the collective experience of our BSEE subject matter experts—which includes engineers with over 30 years of industry experience—for any new rule or regulation that is being developed and finalized. BSEE also held over 50 meetings with external stakeholders including technical experts, industry groups, academia, and the members of the regulated industry. The rule also incorporates technical recommendations from numerous investigations and reports issued following the Deepwater Horizon incident including:

- Department of the Interior (DOI)/Department of Homeland Security (DHS) Joint Investigation Team (JIT)
- National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling
- Chief Counsel for National Commission
- National Academy of Engineering
- BSEE Blowout Preventer (BOP) Forum
- Ocean Energy Safety Advisory Committee
- Chemical Safety Board

Question 2. During the hearing you stated that BSEE is trying to push the bar as it relates to the provisions in the proposed rule beyond API Standard 53. What analysis did BSEE use to determine when and how the bar should be raised above API 53? The API uses an open and transparent process to set industry standards following the requirements of the American National Standards Institute (ANSI). Did BSEE use a similar process when determining the rule's proposed requirements above and beyond API 53? Please explain how BSEE determined these requirements.

Answer. Differences between the proposed rule and API 53 can be attributed to specific recommendations arising from the Deepwater Horizon investigations and analyses. The proposed Well Control Rule represents an effort by the Bureau to codify the recommendations of the several investigative bodies commissioned to determine the causes of the Macondo blowout. In contrast, the API employs a consensus process that results in the development of minimally acceptable performance standards. This process often requires compromises to address domestic and international technical and legal issues from various sectors of the industry. BSEE staff members attended many of these meetings and discussions and were able to identify the provisions of API 53 that potentially did not provide a sufficient level of safety for U.S. OCS operations. In the proposed rule, BSEE requested comments on these supplemental requirements and is considering the data and recommendations provided by industry or third parties.

The CHAIRMAN. Thank you, I appreciate that.

Mr. Leimkuhler, I will recognize you for 5 minutes.

STATEMENT OF JOSEPH LEIMKUHLER, VICE PRESIDENT, DRILLING, LLOG EXPLORATION COMPANY, LLC

Mr. LEIMKUHLER. Good morning. Chairman Bishop and members of the committee, thank you for inviting me to testify on behalf of LLOG Exploration Company. LLOG welcomes this opportunity to provide what we see as improvements to Federal policies on oil and gas activity in the Outer Continental Shelf.

LLOG is the largest privately-owned oil producer in the United States, headquartered in Covington, Louisiana. Our focus is the deepwater U.S. Gulf of Mexico, where we apply a targeted approach to subsea wells and floating production systems to safely and efficiently develop the Nation's deepwater oil and gas resources.

Unlike the major integrated oil and gas companies, our area of focus is limited. However, the level of expertise and capability we bring to those areas is state-of-the-art. There is additional information about our company in your addendum, but I would like to highlight two main points.

The first is safety. At LLOG, we, and especially myself personally, hold it as a core value. Priorities change, but values do not. In scope, we have 16 deepwater developments to date, with 8 fields currently in the OCS under development. We are a small company that does big things.

Depending upon where a subsea well is drilled in the Gulf of Mexico, anywhere from 9 to 11 permits or plan approvals are needed to move a prospect from leasing into production. These approvals come from BOEM, BSEE, and the EPA. In your slide pack is a simplified version of the process, which is shown on Slide 4. Within that regulatory protocol, I would like to highlight three areas where LLOG feels there are improvement opportunities, as well as other issues not addressed on the slide.

The first improvement area is the appropriate balance of prescriptive- versus performance-based regulations. In the past, the technical regulatory staff at the regulators had an appropriate degree of professional judgment that they could apply to approve permits and operations. Over time, that balance has moved to a more prescriptive approach. Of particular note, based on our analysis and review of the proposed Well Control Safety Rule, the

application has become so prescriptive in the proposed rule, relative to well design and real-time monitoring, that it is likely to be counter-productive to safe operations. LLOG strongly encourages BSEE and BOEM to take a balanced approach to regulatory enforcement using prescriptive- as well as performance-based regulations, especially in those two areas. I would be more than happy to provide examples in the follow-up Q&A.

Second is the exploration plan and well permit approval process. I have worked my entire career offshore in the Gulf of Mexico since 1987, and the technical professionals and regional management at the regulatory agencies that I have worked with over that time were and are consistently professional, capable, and dedicated. In my opinion, the Bureau just needs more of them. We are now 1 month away from the 5-year anniversary of the end of the moratorium, yet we continue to see our well-related permits and even exploration plans approved just in time. This is not due to a lack of effort by the staff but, in my opinion, an understaffed situation, despite the best efforts of district and regional management to recruit and retain good talent. I am encouraged that they appear to be taking advantage of the current downturn to add experienced staff, and that should be encouraged.

Third is the commingling process. LLOG strives to make all the wells we drill commercial by utilizing smart well technology to open up multiple zones in adjacent reservoirs within the same well. We have never drilled an expendable well. As long as Mother Nature cooperates and we find the reservoirs in the expected location and depth, we can file for a commingling permit in advance. However, zones often do not come in as expected and we need to file an initial commingling permit or modify an existing one.

With a rig on location costing $1 million a day in capital, we need to evaluate the ability and likelihood to obtain commingling permit approval in time, versus the impact of costly delays. Under such conditions, the added burden or risk of a regulatory delay has actually made some zones uneconomic to produce. This hinders the industry's ability to bring American energy to U.S. consumers and provide a robust supply of affordable, reliable energy.

Among the additional improvement opportunities are the impact of rigid application of the Jones Act to offshore facility installation, and the impact of obtaining Clean Air permits.

With respect to the Jones Act and the heavy-lift vessels required to install offshore facilities, LLOG encourages the U.S. Customs and Border Protection to adhere to the prior historical application of the law with respect to the use of heavy-lift vessels. LLOG feels application of the Jones Act to the heavy-lift vessels forces us to possibly transfer jobs overseas and away from U.S. Gulf Coast fabrication yards. On this issue, LLOG commends a letter sent by BBSE Director Brian Salerno to the U.S. Customs and Border Protection earlier this month supporting the industry position to return to the historical application of the Jones Act with respect to heavy-lift vessels used in offshore construction.

Regarding the air permits, the Clean Air Act compliance is incorporated into the exploration plan approval process, as required by BOEM, except for the Eastern Gulf of Mexico, where the EPA air permit protocol is quite different. The EPA permits take 12 to 18

months to secure and, in our view, relative to the BOEM protocol, adds operational complexity and delays with no actual benefit relative to Clean Air Act compliance. LLOG urges you to consider BOEM for the Clean Air Act compliance across the Gulf of Mexico.

Thank you for the opportunity to present the views of LLOG and myself on these issues. The safe, efficient production and use of our Nation's resources in the OCS continues to be critical for our Nation's energy, and I am happy to answer any questions the committee may have or raise additional issues beyond which I could cover in my 5 minutes.

[The prepared statement of Mr. Leimkuhler follows:]

PREPARED STATEMENT OF JOSEPH LEIMKUHLER, VICE PRESIDENT, DRILLING, LLOG EXPLORATION COMPANY LLC

INTRODUCTION

Chairman Bishop and members of the committee, thank you for inviting me to testify today on behalf LLOG Exploration Company. LLOG welcomes this opportunity to provide what we see as improvements to Federal policies on oil and gas activity to further America's energy, economic and national security by strengthening the development of America's resources in the Outer Continental Shelf (OCS). My goal is to provide you a snapshot of LLOG's current operations, how those operations are conducted within the regulatory processes of the Gulf of Mexico, and what we see as improvement opportunities.

A SNAPSHOT OF LLOG

LLOG is one of the largest privately-owned oil and gas firms in the country and is the largest private oil producer in the United States. Our focus is the U.S. Gulf of Mexico where we apply a targeted approach using floating production systems and subsea wells to safely and efficiently develop the Nation's deepwater oil and gas resources.

Unlike the major, integrated oil and gas companies, our areas of focus are limited; however, the level of expertise and capability we bring to those areas is state-of-the-art. There is additional information about LLOG in the addendum to my testimony, but I'd like to highlight two main points:

- Safety—At LLOG we hold safety as a core value—priorities may change but values do not. Recognition of that value is LLOG being awarded the SOAR award in 2008, which was the last year this award was given for Safe Operations and Accurate Reporting.
- Scope—We have 16 deepwater developments to date with 8 fields in the OCS currently under development.

OFFSHORE PERMITTING PROCESS AND OPPORTUNITIES FOR IMPROVEMENTS

To portray the various and numerous regulatory processes and permits a company must execute and achieve during the offshore exploration and production process, I have attached a diagram (Slide 4 in Attachment) called the Simplified Permit Process Overview for a Subsea Well Tie-In. This flow chart shows how the process of lease acquisition to first production plays out within the regulatory framework for a Subsea Well Tie-in. While this particular diagram is specific to the subsea well tie-in permit process, it is indicative of the types of approval processes that companies are required to go through before projects can begin or be altered in the Federal waters of the Gulf of Mexico (GOM).

Subsea wells, tied back to a floating production platform, are LLOG's basic focus area for our offshore operations. Depending on where a subsea well is drilled in the Gulf of Mexico, anywhere from 9 to 11 permits or plan approvals are needed to move a prospect from leasing to production. For most of the Gulf of Mexico, those permits and plan approvals are split between the Bureau of Ocean Energy Management (BOEM) (red text on Slide 4) and the Bureau of Safety and Environmental Enforcement (BSEE) (blue text), both within the Department of the Interior. However, for the eastern portion of the central gulf planning area, the Environmental Protection Agency (EPA) (bold black text) has that authority. Among all of these

approval processes, I wish to highlight three where LLOG feels there are improvement opportunities and address other issues not indicated on this process diagram.

Application of Regulations—Prescriptive Versus Performance

The first improvement area is achieving the appropriate balance of prescriptive versus performance based regulations and application of the regulations. In the past, the professional technical staff within BSEE (and before BSEE's creation, its predecessor agency the Minerals Management Service) had a greater degree of professional judgment that they could apply to approve permitted operations. Permits were approved when the operator's plans met the regulatory requirements, and for any gray areas, operators provided a justification for why the submitted plan met the intent of the regulations and provided the necessary safeguards to manage and mitigate hazards.

Over time, that mixture of prescriptive and performance based regulatory approval protocol has moved to a more prescriptive based regulatory approach. Of particular note, based on our analysis and review, the proposed well control safety rule has become so prescriptive the actual application of that proposed rule to well design and real time monitoring is likely to be counterproductive to safe operations. LLOG strongly encourages BSEE and BOEM to take a balanced approach to regulatory enforcement using a balance of prescriptive as well as performance based regulations, especially in these two areas. I will be more than happy to follow up with examples in the follow-up Q&A.

Drilling Permit Approval Process

Second is the Application for Permit to Drill (APD), or generally, the drilling permit approval process. I have worked my entire offshore career since 1987 in the Deepwater Gulf of Mexico and the technical professionals and Regional Management at the MMS, BOEM, and BSEE that I have worked with over that time were and are consistently professional, capable and dedicated . . . in my opinion BSEE just needs more of them.

We are now 1 month away from the 5-year anniversary of the end of the moratorium, yet we continue to receive our well related permits (drilling and well as completion and workover) just in time. This is not due to a lack of effort by the BSEE and BOEM staff, but in my opinion an understaffed situation at BOEM and BSEE, despite the best efforts of BSEE and BOEM district and regional management to retain and recruit talent. The overall approval cycle could be improved with an increase in agency technical capacity.

We are finding that the more knowledgeable staff are retiring which leaves the current staff short-handed, and overworked, not to mention the lack of experience among the younger staff. This is part of the larger "Big Crew Change" and is a challenge not only for industry but also for BSEE's District Managers and BOEM's Regional Supervisors. Because of this situation, permits are being approved with a short window prior to commencement of operations, which makes it difficult for operators to conduct operations that require a long lead time for planning and sequential approvals.

Additional capable agency staff = additional permit approvals, additional production revenue and additional economic development. An innovative compensation/recruitment plan as well as the current industry downturn is likely to provide an opportunity for BSEE and BOEM to recruit experienced staff and should be leveraged to increase the permit approval capacity of the bureaus.

Commingling Approval Process

Third is the commingling approval process. LLOG strives to make all the wells we drill commercial by utilizing smart well technology to open up multiple zones in adjacent subsurface reservoirs within the same well. To make such projects economically viable we normally request to commingle downhole the production from those zones. Our deepwater rigs often drill development wells in subsea fields where the completion and subsequent production from the wells immediately follows the drilling and casing of the well in a continuous operation. As long as Mother Nature cooperates and we find the reservoirs in the expected location and depth, we can file for our commingling permit with plenty of time for approval. However, we often find zones that do not come in as expected and we need to either file for an initial commingling permit or modify an existing permit. With a rig on location consuming over $1 million a day in capital, we need to evaluate the ability and likelihood to obtain commingling permit approval versus the impact of costly delays to the project profitability. Under such conditions the added regulatory burden adds cost and actually makes some zones uneconomic to produce. This hinders industry's ability to

bring American energy to U.S. consumers and provide a robust supply of affordable, reliable energy.

ADDITIONAL REGULATORY IMPROVEMENT OPPORTUNITIES

Additional improvement opportunities related to operations are in the areas of Containment Response, the impact of rigid application of the Jones Act to offshore facility installation, the impact of revisions to supplemental bonding requirements, and the impact of Clean Air Act permits.

In containment response, those needs are met by two providers: the Marine Well Containment Corporation (MWCC) and HWCG. Both are very capable organizations that together provide a diversity of suppliers, operator expertise, and response capabilities. This diversity of response should be encouraged and continued. However, in LLOG's view, this response capability is at risk of being compromised if Responder Immunity is not improved. We urge the passage of the Senate Coast Guard Authorization Bill (S. 1611) covering improved Responder Immunity.

With respect to heavy lifts associated with offshore facilities installations and the Jones Act, LLOG encourages the U.S. Customs and Border Protection to adhere to the historical application of the law with respect to transport and heavy lift vessels. Current rigid application of the Jones Act to heavy lift vessels for the minimal distances that these vessels move the suspended load (in most cases hundreds of feet or less) is resulting in increased lift complexity and scope and adding risk. In addition LLOG feels continued application of the Jones Act to heavy lift vessels has the potential to transfer work and jobs away from Gulf Coast Fabrication yards. On this issue LLOG commends the letter sent by BSEE Director Salerno to the U.S. Customs and Border Protection supporting the industry position to return to the historical application of the Jones act to heavy lift vessel use in offshore construction.

With regard to the management of Plug and Abandonment liabilities, it is LLOG's understanding that revisions to the supplemental bonding requirements are to be released in an upcoming Notice to Lessee (NTL). LLOG requests that serious consideration be given to the scope of the proposed changes. If the changes are more than a refinement or clarification of the existing regulations, then the rulemaking process should be followed.

Regarding the issuance of air permits required to be compliant with the Clean Air Act (CAA). For wells drilled in the OCS in the Western Planning area, the CAA compliance is incorporated into the Exploration Plan approval process required by BOEM. This also applies to the majority of wells drilled in the Central Gulf Planning Area with the exception of the eastern portion of the Central Planning Area where EPA jurisdiction applies. The EPA air permit approval process and protocol is quite different from the BOEM protocol and takes from 12–18 months to secure. This EPA permit is actually individual rig specific versus rig type specific in the BOEM protocol, and in our view adds operational complexity and delays with no actual benefit relative to CAA compliance. LLOG urges you to allow BOEM to assume CAA compliance across the GOM and at a minimum allow BOEM to administer CAA compliance for the full western and central Gulf planning areas.

Finally with regard to the interface between Regulators and Operators LLOG would like the Department of the Interior to perform an After Action Review—of the allocation of work scope between BOEM and BSEE. LLOG understands and supports the split of the revenue function to BOEM and the operational enforcement role to BSEE. However, in LLOG's view the full permitting and plan approval function after the lease sale through the full operational cycle should fall to BSEE.

Thank you for the opportunity to present the views of LLOG and myself on these issues. Safe, efficient production and use of our Nation's resources from the OCS continues to be critical for our Nation's energy, economic, and national security. I am happy to answer any questions the committee may have.

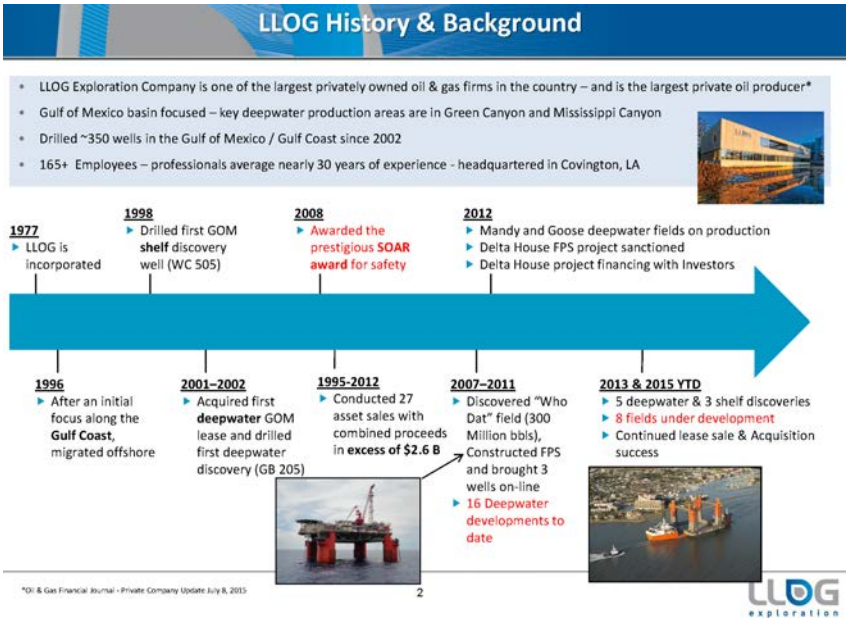
Attachment: Powerpoint Slides

ATTACHMENT

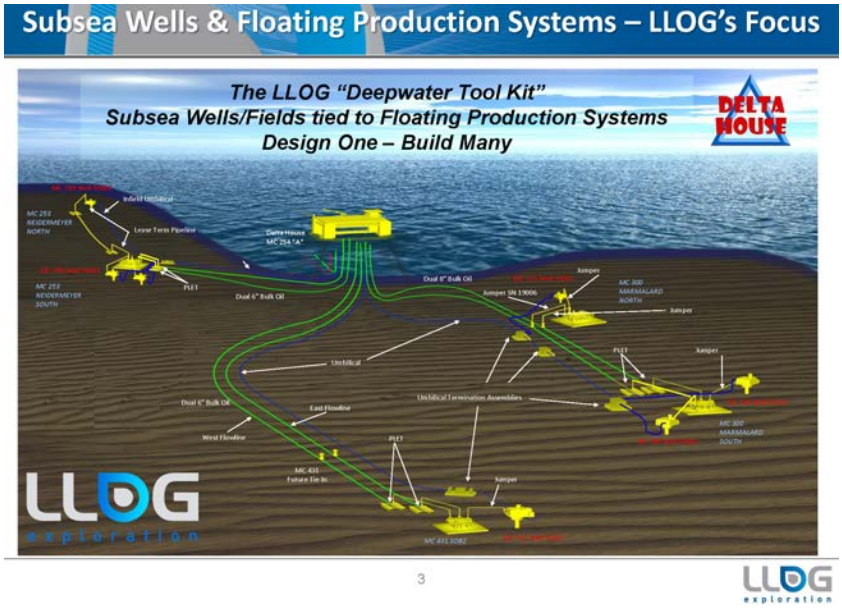
Slide 1



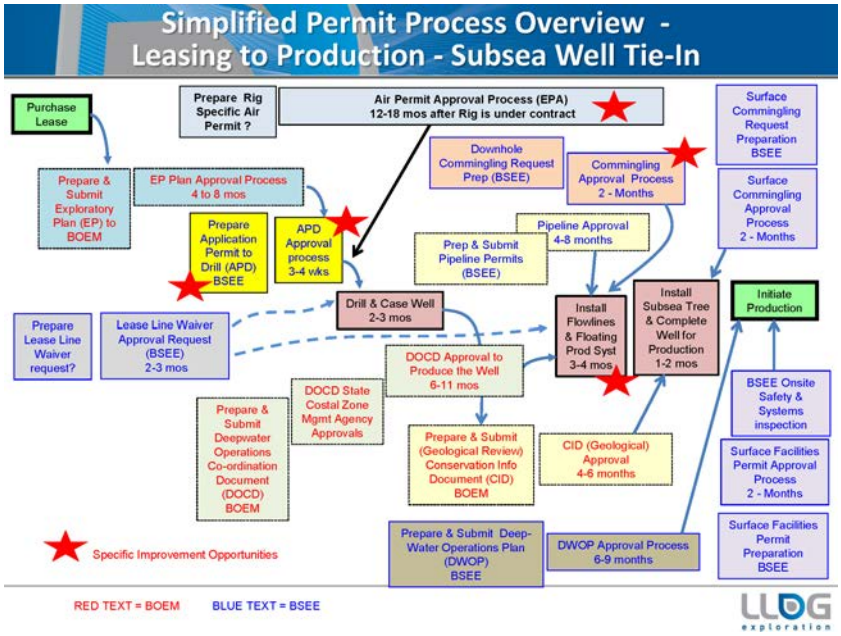
Slide 2



Slide 3



Slide 4



Slide 5

OCS Drilling & Production Opportunities & Challenges

Leasing & Plan Approval – BOEM (EPA for EGOM)

- ★ Clean Air Act (CAA) Permits – common regulator for the GOM is desired, or match the CAA jurisdictions with the GOM planning areas.



Well Activity / Operational Plan Approvals – BSEE

- ➢ Application for Permit to Drill – APD Drilling Permits – Increased Bureau capacity to approve permits is needed.
- ★ Proposed Well Control Rule (PWCR) Regulations – too prescriptive and potentially counterproductive – Need to be more performance based – challenge operators to demonstrate how they address hazards and mitigate risks – versus more prescriptive rules that can add risk and complexity – Ex. Real Time Monitoring Centers and Increased Drilling Margins.
- ★ Completion Permits – (Comingling issues)

Operations Regulatory Enforcement – BSEE & USCG

- ★ Containment Response Challenges
  - Diversity of Suppliers supports a diversity of Operators & provides a diversity of response capabilities– MWCC & HWCG
  - Responder Immunity Issues are compromising response capabilities.
- ★ Marine Operations - Jones Act – Facilities installation.
  Rigid application of Jones Act to offshore lift operations has put at risk Gulf Coast Fabrication jobs, facilities installation cost increases and increased offshore lift complexity and risk.

5

LLOG exploration

Slide 6

OCS Production Opportunities & Challenges - 2

P&A Liabilities & End of Field Life Issues

- ★ Supplemental Bonding – Changes to the requirements/levels should use the applicable rule making protocol for material changes versus a clarification of existing protocol.



Air Permits – BOEM Western & Central GOM
EPA for East Central & Eastern GOM

- ★ Clean Air Act (CAA) Permits – common regulator for the GOM is desired, or align the CAA jurisdictions with the GOM planning areas.

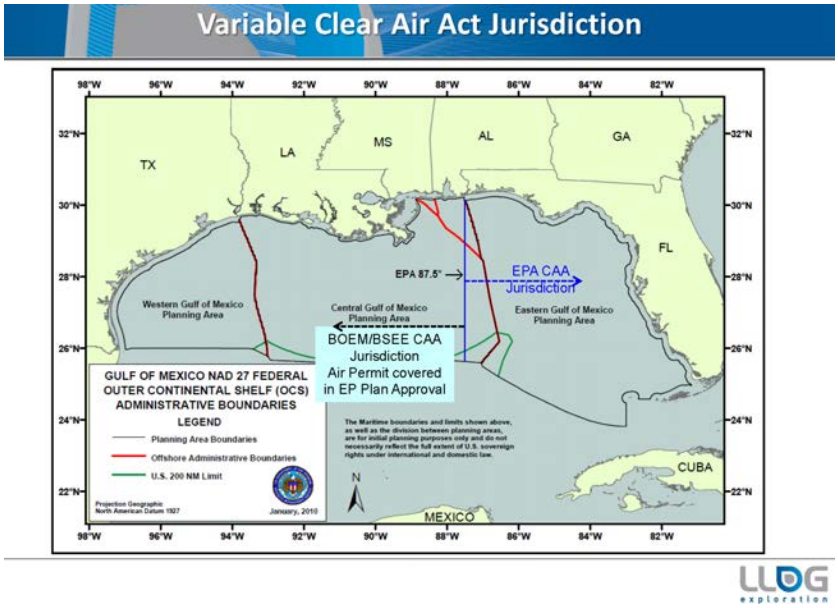
Regulators & Operator Interface/Relationships

- ➢ Agency Staffing levels – Look beyond the numbers.
  - The "Big Crew Change" has impacted the regulatory agencies just as hard as the industry…current downturn is an opportunity to add experienced technical staff. Gaps are in technical not compliance staff.
  - Retaining key experienced critical TECHNICAL staff, and attracting additional technical staff is essential.
- ➢ Permit & Plan Processing - Despite the best efforts of existing staff, permit/plan process times are still a challenge.
  - From an outside operator's view, our plan approvals are still arriving just in time for operations with advance planning requirements.
  - For "continuous operations" – i.e. completing a well immediately after drilling, the production co-mingling approval process is slowing down operations and costing operators money and placing reserves at risk.
  - Regulatory variability across the districts in the OCS – exists but is manageable.

6

LLOG exploration

Back-Up Slide



The CHAIRMAN. Thank you.

Mr. Henderson.

STATEMENT OF JONATHAN HENDERSON, JD, MBA, MANAGER OF GULF OF MEXICO FIELD OPERATIONS, GULF RESTORATION NETWORK

Mr. HENDERSON. Thank you. We continue to hear about reducing our dependence on foreign oil, but we cannot import clean air, water, food, and soil. The BP disaster of 2010 and decades of oil extraction has led to severe environmental, social, and political impacts.

To remind this committee of just a few, hundreds of millions of gallons of oil have leaked into the Gulf; the destruction of sensitive fish habitat like coral reefs; countless dead marine mammals and sea turtles; contaminated beaches and wildlife refuges; deployment of harmful dispersants; discharging of fracking chemicals; 27,000 abandoned, unmonitored, and possibly leaking wells; the devastation of communities and loss of cultures; shrimp with no eyes, fish with lesions and tumors; destroyed family businesses and devastated families; suicides; sick, dead, and dying cleanup workers; and a distrust of our government. In addition, regulatory capture and the hijacking of our democracy, not to mention that roughly 600 square miles of Louisiana's wetlands have been destroyed by the oil and gas industry, which is very much a threat to the existence of my hometown of New Orleans, and the very building that we sit in today.

In the fall of 2010, I filed my first official pollution incident report with the National Response Center (NRC) for an oil slick leaking out of a wellhead in a bay known for very productive and economically important oyster beds. To date, I have filed approximately 100 NRC reports for leaks, including offshore and onshore platforms, pipelines, wellheads, and tank batteries—most recently, on August 17, 2015, for a suspected ruptured gas pipeline in Lafourche Parish, and that same day a roughly 15-mile-long rainbow sheen well offshore.

There are very few people who do this kind of proactive monitoring work in this region, but the need is great. My reports to the NRC have led to numerous successful investigations by the U.S. Coast Guard, which in turn has led to mutual respect and trust between myself and the leaders of various sectors and their incident management personnel.

Since July of 2010, the NRC has recorded approximately 10,000 spills of crude oil, petrochemicals, and other contaminants into Gulf of Mexico waters.

The BP disaster highlighted the flawed process by which oil discharges are reported and cleaned up, and for which companies are held accountable. It revealed how the official channels of reporting and cleaning up oil pollution rely on the polluters themselves. Little information is made available to the public, and the information that is presented could be considered untrustworthy. These massive reporting gaps make it impossible to determine how much oil pollution is actually being released into the Gulf.

One particularly egregious example of underreporting involves the Taylor Energy leak. For over 10 years this chronic oil leak has been spewing oil into the Gulf waters every day, with no end in sight. The discharge began in 2004 when an undersea landslide caused by Hurricane Ivan damaged a Taylor platform and 28 wells. Our work monitoring the Taylor leak and a recent AP investigation published in April shed light on the underreported flow amount and led to revision of the estimates.

In the immediate aftermath of Hurricane Isaac in 2012, I, along with my partners at the Gulf Monitoring Consortium, took several monitoring trips and documented leaks. Our findings, from a review of NRC reports, indicated that there were 130 accidents resulting from the storm that were reported to the NRC.

Based on my experience in the Gulf region and my participation in the New Orleans area contingency plan meetings and exercises, I am greatly concerned that government and industry are not adequately prepared for a worst-case scenario. An ongoing blowout in the Gulf of Mexico hit by a Category 5 hurricane would cause the response to be put on hold, and we could very likely be hit by another hurricane shortly thereafter. This would be an environmentally chaotic situation that is not being planned for and that threatens our homeland security.

This committee should introduce and pass a Gulf of Mexico Regional Citizens' Advisory Council. Attached to my testimony is a draft bill that was attempted to be introduced in 2014. A Gulf of Mexico Regional Citizens' Advisory Council will enhance engagement, communication, collaboration, and trust among the Gulf oil

industry, Federal and state governments, and citizen stakeholders potentially impacted by Gulf oil operations.

Five years after the BP disaster, attempts are being made to open up the Eastern Gulf of Mexico and the Mid-Atlantic. This should not happen. At the same time these attempts are being made, investigations by New Orleans-based WLTV have raised serious concerns that the new post-BP safety standards may not be taken seriously enough at existing Gulf operations.

The bottom line is that Congress needs to act. Congress needs to pass a Regional Citizens' Advisory Council. It can raise the liability limit for offshore drilling, and it needs to make the Federal Oil Spill Liability Trust Fund available for Federal agencies when incidents occur.

Congress must start taking our oil, air, and water seriously. It is our homeland security. Thank you.

[The prepared statement of Mr. Henderson follows:]

PREPARED STATEMENT OF JONATHAN HENDERSON, MANAGER, GULF OF MEXICO FIELD OPERATIONS, GULF RESTORATION NETWORK

BRIEF BIO

Jonathan Henderson manages the Gulf Restoration Network's field operations in the Gulf region. By air, sea and land, he searches for, documents and reports pollution incidents such as leaking pipelines, well heads, platforms, and ongoing BP disaster impacts. He also documents the extensive O&G industry destruction of Louisiana wetlands. Jonathan is a founding member of the Greater New Orleans Water Collaborative of which he serves on the interim steering committee and as co-chair of the Advocacy working group. Jonathan is the Founding President of Vanishing Earth, Advocacy + Consulting + Photography. Born and raised in New Orleans, Jonathan grew up fishing and canoeing in Louisiana's bayous and creeks, visiting family along coastal Mississippi, and vacationing on beaches in Alabama and Florida. Jonathan has a Bachelor's degree in Theater from LSU, a Master's of Business Administration from the University of Louisiana at Lafayette, and a JD from Southern University Law Center.

BRIEF DESCRIPTION OF GULF RESTORATION NETWORK

Founded in 1994 and headquartered in New Orleans the Gulf Restoration Network is non-profit environmental conservation and advocacy organization committed to uniting and empowering people to protect and restore the natural resources of the Gulf of Mexico region for future generations. For more information about GRN, visit www.healthygulf.org.

REPORTING POLLUTION INCIDENTS IN THE GULF

My work documenting pollution incidents began in late April, 2010 just a few days after the Deepwater Horizon exploded and sank. Throughout 2010, I took approximately 50 trips by air and sea to document the environmental impacts as they were unfolding offshore in the Mississippi Canyon and on barrier islands, beaches, bays and wetlands throughout the Gulf Coast. Given its exclusive focus on the Gulf region, GRN quickly became a go to source for information for the public, media, scientists and researchers. With my local knowledge and connection to the Gulf region, access to planes and boats to carry me into the field, many of the trips I took involved guiding and educating media about the situation. Today, much of my work involves doing the same thing though I have added to my focus areas many of the Gulf's other environmental problems including but not limited to the extractive industry's severe impact on Louisiana's wetlands.

In the Fall of 2010, I filed my first official pollution incident report with the National Response Center (NRC) for an oil slick leaking out of well-head in a Bay known for very productive and economically important oyster beds. To date, I have filed approximately 100 NRC reports for pollution incidents including leaks from offshore and onshore platforms, pipelines, well-heads, tank batteries, etc. Most recently, on August 17, 2015, I filed Incident Report #1125932 for a suspected ruptured gas pipeline in Lafourche Parish, and Incident Report #1125933 for a roughly 15-mile-long rainbow oil sheen. There is rarely a trip that I take where I don't find

and report some sort of pollution incident. Knowing what to look for and how to document and report an Incident is a skill that I learned from having spent thousands of hours in the field; reading various oil spill response manuals; talking with leading government and industry experts; spending time in the field with some of the world's top experts from the scientific, academic, and environmental NGO communities; flying with the most experienced pilots in the Gulf region; and, dozens of trips with captains of charter, shrimp, and oyster boat captains. Still, there are a lot of trainings that would assist this work and that I would pursue if they were not so cost-prohibitive. Moreover, financial constraints also limit the number of monitoring trips that I can take and thereby the number of NRC reports I am able to file. There are very few people that do this kind of proactive monitoring work in the Gulf region, but the need is great. My reports to the NRC have led to numerous successful investigations by the USCG which, in turn, has led to mutual respect and trust between myself and the leaders of various USCG sectors and their Incident Management personnel, and other response agencies. Especially in the immediate aftermath of hurricanes, as I was told by USCG Sector New Orleans, having extra eyes in the sky is a very valuable source for the Unified Command as I am able to provide direct intel to the Unified Command for any problems I discover, and what geographic areas I searched.

CHRONIC OFFSHORE POLLUTION IN GULF

Since July of 2010, the National Response Center has recorded approximately 10,000 spills of crude oil, petrochemicals, and other contaminants into Gulf of Mexico waters. This shocking animated map [1] created by Skytruth.org illustrates where each of these incidents occurred between July 2010 and April 2015.

To make matters worse, a 2010 Associated Press investigation reported 27,000 abandoned oil wells in the Gulf of Mexico—each a potential source of leaking oil.[2] Very few of these abandoned wells are being monitored by Federal officials or industry for well-integrity and it is unknown how many are slowly leaking oil and/or gas into the marine environment on a daily basis. While natural seeps on the Gulf floor are known to exist and have been mapped out, an investigation into the cause of a leak should not be written off as naturally occurring given the high number of abandoned wells.

LACK OF TRANSPARENCY

The BP disaster in 2010 highlighted the flawed process by which oil discharges are reported and cleaned up, and through which companies are held accountable. It revealed how the official channels of reporting and cleaning up oil pollution rely, to an inordinate degree, on the polluters themselves. Little information is made available to the public, and the information that is presented could be considered untrustworthy. Whenever oil, hazardous materials and other pollutants are released into a body of water, the Clean Water Act requires the responsible party to file a report with The National Response Center, a Federal communications center staffed by the Coast Guard. From October 2010 to September 2011, a total of 2,903 oil release reports were filed with the NRC from the Gulf region, but 77 percent of those reports did not include an estimate of the amount of oil spilled, according to a 2012 report [3] by the Gulf Monitoring Consortium (GMC), of which GRN is a member. The NRC reports that did include a spill estimate account for a combined 250,000 gallons of crude released into the Gulf during the 1-year period. Consortium estimates the actual total amount spilled during the period to be between 1.5 million and 2.2 million gallons. These massive reporting gaps make it impossible to determine how much oil pollution is actually released in the Gulf of Mexico.

One particularly egregious example of underreporting involves the Taylor Energy leak, which I have documented and filed numerous NRC reports over the last few years. For over 10 years, this chronic oil leak has been spewing oil into the Gulf waters every day, with no end in sight. The discharge began in 2004 when an undersea landslide caused by Hurricane Ivan damaged an offshore platform and 28 associated wells. Taylor has yet to stop the daily flow of oil from the site and oil is still leaking to this day. A recent AP investigation [4] published in April 2015 shed light on the underreported flow amount and led to the USCG revising its estimates significantly. The Taylor leak gives the impression of a broken system, where oil production is prioritized over concerns for the environment. Recently, a settlement

[1] http://blog.skytruth.org/2015/04/the-other-gulf-oil-disaster.html.
[2] http://www.cbsnews.com/news/27000-abandoned-gulf-oil-wells-may-be-leaking/.
[3] http://skytruth.org/gmc/wp-content/uploads/2012/05/Gulf-Monitoring-Consortium-Report.pdf.
[4] https://www.youtube.com/watch?v=3WHe0C9lj30.

agreement between Taylor and a group of GMC member organizations was announced. The lawsuit sought information about Taylor's response efforts which have been hidden under a 'veil of secrecy' by Taylor.[5]

HURRICANES AND OIL DON'T MIX

In the immediate aftermath of Hurricane Isaac in 2012, I along with other GMC members took several monitoring trips by boat and plane to search for, document and report any possible resulting leaks. GMC announced our findings from a review of NRC reports that occurred during and immediately after Hurricane Isaac. A total of 130 accidents resulting from the storm were reported to the National Response Center. Those accidents dumped at least 12.9 million gallons of pollutants and contaminated water into the environment. You can read more about our Key Findings [6] or jump right in and read the full report.[7]

Based on my experience in the Gulf region and my participation in the New Orleans Area Contingency Plan meetings and exercises, I am gravely concerned that government and industry is not adequately prepared for a worst case scenario. Imagine for a moment a BP type blowout that has been gushing for months. Then, a Category 5 hurricane comes through disrupting the containment and response effort. If the hurricane hits port facilities where the response equipment was evacuated to, it could be weeks or months before the assets are fully resourced and redeployed. Then the process of trying to contain the leak would start again. Like Hurricane Rita followed Katrina in 2005, what if then we get hit by another major storm again? In this scenario, for months on end oil would be spewing unimpeded into the Gulf only to have that oil mercilessly pushed onshore with what would be a massive storm surge. The possibility of having oil completely washing over coastal communities is very real, especially given the loss of wetlands that act as a buffer.

HNRC SHOULD INTRODUCE AND PASS A GULF OF MEXICO REGIONAL CITIZENS' ADVISORY COUNCIL

Congress identified complacency on the part of the oil industry and government regulators as a root cause of the Exxon Valdez spill. The Oil Pollution Act of 1990 was passed by Congress in response to the 1989 Exxon Valdez oil spill. In it, Congress mandated citizens' councils for Prince William Sound and Cook Inlet. The purpose of these councils is to promote partnership and cooperation among local citizens, industry and government, and to build trust and provide citizen oversight of environmental compliance by oil terminals and tankers

A GoM RCAC will enhance engagement, communication, collaboration, and trust among the Gulf oil industry, Federal and state governments, and citizen stakeholders potentially impacted by Gulf oil operations. These citizen stakeholders include fishermen, tourism businesses, indigenous peoples, conservation groups, scientists, and local governments and communities. The GoM RCAC will fund its own research on issues of importance to citizens—spill prevention and response, dispersants and their alternatives, human health, ecosystem impacts, tanker safety and vessel traffic risks, fisheries protection, and more. Through its research, consultative, and deliberative process, the Council will provide informed advice to industry and government, and citizens will gain a better understanding of the complex realities of offshore oil. Importantly, the Council will operate autonomously, rather than under the direction of government or industry.

In 2011, the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling endorsed the citizen call for a GoM RCAC.

In 2013, citizens requested the introduction and passage by Congress of the Gulf of Mexico Regional Citizens' Advisory Act of 2013.[8]

In September 2014, a letter was sent by citizens asking Secretary Jewel to use her administrative powers to establish a GoM RCAC. A copy of this letter is included. Also included with my testimony is a copy of our proposed legislation titled: Gulf of Mexico Regional Citizens' Advisory Council Act of 2014. On behalf of Gulf citizens, I urge the members of this committee to introduce this bill and get it passed.

---

[5] http://www.gulfmonitor.org/taylor-settlement/.
[6] http://www.gulfmonitor.org/gmc-isaac-report/.
[7] http://www.gulfmonitor.org/wp-content/uploads/2013/08/Isaac.GMC_Pollution.Report.Final_1.2.pdf.
[8] http://www.onwingsofcare.org/gomrcac/GoMRCAC-ProposedLegislation2013-07-29.pdf.

FIVE YEARS LATER, SERIOUS CONCERNS REMAIN, SAFETY AUDITS, STAFFING

Although there have been improvements in offshore drilling safety and government oversight since 2010, we still have a long way to go to make it as safe as possible. At the same time attempts are being made by the oil industry to open up the Eastern Gulf, the Mid-Atlantic, and now the Arctic to drilling, investigations by New Orleans based WWLTV [9] raise serious concerns that the new post-BP safety standards may not be taken seriously enough at existing gulf operations, and a lack of transparency is impeding Gulf citizens' ability to be informed. A similar problem is occurring in Alaska where a FOIA suit was brought against BSEE for failing to release safety documents for the Shell offshore drilling project currently underway in the Arctic Ocean.[10] Also, a recent DOI Inspector General report determined that BSEE still does not have enough trained staff to conduct timely investigations into safety incidents and leaks. These issues need to be fixed immediately and further support the need for a GoM RCAC.

CONGRESS NEEDS TO ACT

Although there have been improvements in offshore drilling safety and government oversight since 2010, we still have a long way to go to make it as safe as possible. Congress needs to get far more serious about this issue. While the Administration has taken positive steps in offshore safety post-Deepwater Horizon, Congress has done almost nothing (other than RESTORE Act). The Oil Spill Commission Review in 2013 gave the Administration actions a grade of "B", industry a "B–", and Congress a "D+".

Congress needs to pass a GoM RCAC bill; it needs to raise the liability limit for offshore drilling (which a is still at only $75 million as per OPA90); and it needs to make the Federal oil spill fund—the Oil Spill Liability Trust Fund—available to Federal agencies for spill prevention efforts, without having to go through the cumbersome appropriations process. The OSLTF is now at about $4 billion, gains about $500 million/year (from an 8 cent/barrel oil tax nationwide) and this money can and should be available to agency spill prevention needs.

*****

The following documents were submitted as supplements to Mr. Henderson's testimony. These documents are part of the hearing record and are being retained in the Committee's official files:

—September 2014 letter sent by citizens to Secretary Jewel asking her to use her administrative powers to establish a GoM RCAC

—Proposed legislation titled: Gulf of Mexico Regional Citizens' Advisory Council Act of 2014

The CHAIRMAN. Thank you.

Ms. Davis, can you pull that right up to your mouth so we can hear you?

STATEMENT OF LORI DAVIS, PRESIDENT, RIG-CHEM

Ms. DAVIS. Thank you, Chairman Bishop and committee members, for giving me the opportunity to share my comments.

RIG-CHEM was formed in 1980 as a small oilfield service company that supported the energy industry. In 1984, my father, at the age of 50, was forced into early retirement by the downturn in the industry, much like what we are facing today. With his $25,000 severance after 21 years of service with Schlumberger, he invested his and his family's future in RIG-CHEM. By doing so, my parents created an opportunity for their children with the hope that the

[9] http://www.wwltv.com/story/news/local/investigations/david-hammer/2015/04/20/5-years-later-industry-responds-regulators-lag-behind/26108425/.

[10] http://www.peer.org/news/news-releases/shell-arctic-offshore-safety-data-still-under-wraps.html.

company would grow and support our family for many years to come, which it has. The days of modest investment and hard work are not as easily come by. Times are different, and $25,000 will not afford the same opportunities that were possible in 1984.

Our company employees 16 people across Louisiana and Texas, with an average tenure of 16 years of company service. We are proud to say that the average annual income of our dedicated employees is $66,000 per year. We also provide company-paid health insurance, 401(k) and profit sharing, and have never laid anyone off despite the cyclical highs and lows of the energy industry.

Over the last 30 years, our company has weathered through tough times, business challenges, increased competition, industry fluctuation, hurricanes, a moratorium, the Great Crew Change, and now a terrifying revisit of the early 1980s with the decline in the price of oil. Many other small, family-owned companies face these same challenges, but today our battle is not just managing economic market fluctuations; we now also have the impending obstacles of continued tightening of government regulation. These regulations will limit opportunities and squeeze small businesses out of the market, out of business today.

Our daily focus is to remain competitive, safe, and efficient in a shrinking industry, where the ability as a small, diverse company that has to compete against the majors is becoming increasingly difficult. There was a time that oil and gas operators welcomed small business to help develop new technology and keep competition healthy. Since Macondo, the moratorium, slow recovery, government interference, and record low oil prices, the value of diverse business is becoming extinct as companies do what is necessary to survive the times.

Speaking on a local level, the community where RIG-CHEM is located, Terrebonne Parish in Louisiana, last February had the lowest unemployment rate, at 2.8 percent, in the country. This week we were advised that our parish has been added to a credit rating watch list due to the rising unemployment and reduced sales tax collections, which are down by 15 percent. These uncertain times are more reason to work closely on regulation to prevent this from becoming a grave reality for many energy municipalities.

My plea to you is to allow industry to work collaboratively with government to address the needs of safety and responsibility together. Let the experts in their respective fields guide the decisions that impact our energy future and ultimately energy independence. When regulations are mandated, require that these burdens that are being leveraged upon our Gulf of Mexico operators be the same for those we import from into the United States, to level the global playing field.

I am not a technical expert, but a business owner who is concerned about the impact that the proposed Well Control Rule will indirectly have on RIG-CHEM, our employees, and the many small companies like ours. Let us together protect our future. I stand behind the oil and gas operators and state that the proposed Well Containment Rule does not provide substantial improvements to safety or build on post-Macondo progress, will hinder offshore oil and gas development, will eliminate jobs and hurt our energy security in the future, and I advise that the rule be rewritten.

We cannot control OPEC or the forces of nature, but we can stop imposing more regulations that will drive us out of business. There was a saying back in the 1980s—"the last person to leave should turn off the lights." Folks, the lights are dimming, and we will have no one else to blame but government for refusing to work toward a reasonable solution.

Let's work together. Let's work to keep the lights on.

Thank you very much for your time.

[The prepared statement of Ms. Davis follows:]

PREPARED STATEMENT OF LORI DAVIS, PRESIDENT/CEO, RIG-CHEM, LLC

Thank you Chairman Bishop and committee members for giving me the opportunity to share my comments with you today regarding "Economic Impact of Federal Policies on Energy Production and Economic Growth in the Gulf."

My company, RIG-CHEM has been impacted and will face more challenges should government continue to impose more regulations on an industry already burdened by challenging economic times.

RIG-CHEM was formed in 1980 as a small oilfield service company that supported the energy industry. In 1984, my father at the age of 50 was forced into early retirement by the downturn in the industry much like what we're facing today. With his $25,000 severance after 21 years of service with Schlumberger, he invested his and his family's future in RIG-CHEM. By doing so, my parents created an opportunity for their children with the hope that the company would grow and support our family for many years to come, which it has. The days of modest investment and hard work are not as easily come by, times are different, and $25,000 will not afford the same opportunities that were possible in 1984.

Our company employees 16 people across Louisiana and Texas with an average tenure of 16 years of company service. We are proud to say that the average annual income of our dedicated employees is $66,000. We also provide Company Paid Health Insurance, 401K and Profit Sharing and have never laid anyone off despite the cyclical highs and lows of the energy industry.

RIG-CHEM is a longstanding member company supporting industry organizations that help educate, improve technology, and develop best practices. These organizations are: the Society of Petroleum Engineers (SPE), American Association of Drilling Engineers (AADE), American Petroleum Institute (API), South Central Industrial Association (SCIA), Louisiana Oil and Gas Association (LOGA), Women's Business Enterprise National Council (WBENC) and the Women's Energy Network (WEN).

Over the last 30 years our company has weathered through tough times, business challenges, increased competition, industry fluctuation, hurricanes, a Moratorium, The Great Crew Change, and now a terrifying revisit of the early 1980s with the decline in the price of oil. Many other small family owned companies face these same challenges but today our battle is not just managing economic market fluctuations, we now also have the impending obstacles of continued tightening of government regulation. These regulations will limit opportunities and squeeze small businesses, (the backbone and largest tax contributors of the United States) out of the market. Our daily focus is to remain competitive, safe and efficient in a shrinking industry, where the ability as a small-diverse company that has to compete against the majors is becoming increasingly difficult. There was a time that oil and gas operators welcomed small business to help develop new technology and keep competition healthy. Since Macondo, the Moratorium, slow recovery, government interference, and record low oil prices the once value of diverse business is becoming extinct as companies do what is necessary to survive the times.

Speaking on a local level, the community where RIG-CHEM is located, Terrebonne Parish in Louisiana, last February had the lowest unemployment rate, at 2.8 percent, in the country. This week we were advised that our parish has been added to a credit rating "watch list" due to the rising unemployment and reduced sales tax collections which are down by 15 percent. These uncertain times are more reason to work closely on regulation to prevent this from becoming a grave reality for many energy municipalities.

I support and defend the industry that is committed to a safe working environment where families and friends leave for their jobs that provide national energy and return home safely. This industry has been commanded to work safer, while working smarter and now more efficient.

My plea to you is to allow industry to work collaboratively with government to address the needs of safety and responsibility together. Let the experts in their respective fields guide the decisions that impact our energy future and ultimately energy independence. When regulations are mandated require that these burdens that are being leveraged upon our Gulf of Mexico operators be the same for those who export into the United States to level the global playing field.

I am not a technical expert, but a business owner who is concerned about the impact that the proposed Well Control Rule will indirectly have on RIG-CHEM, our employees as well as many small companies like ours. Let us together protect our future. I stand behind the Oil and Gas Operators and state that the proposed Well Control Rule:

1. Does not provide substantial improvements to safety or build on post-Macondo progress;
2. Will hinder offshore oil and gas development;
3. Will eliminate jobs and hurt our energy security and future; and
4. Advise that the rule be rewritten.

We can't control OPEC or the forces of nature but we can stop imposing more regulations that will drive us out of business. There was a saying back in the 1980s, "the last person to leave should turn off the lights"—folks, the lights are dimming and we'll have no one else to blame but government for refusing to work toward a reasonable solution.

Let's work together; let's work to keep the lights on.

The CHAIRMAN. Thank you.

Our last witness, but certainly not the least, is Dr. Mason.

You are recognized for 5 minutes.

STATEMENT OF JOSEPH R. MASON, HERMANN MOYSE, JR./ LOUISIANA BANKERS ASSOCIATION, ENDOWED PROFESSOR OF BANKING, LOUISIANA STATE UNIVERSITY; AND SENIOR FELLOW, THE WHARTON SCHOOL

Dr. MASON. Good morning, Chairman Bishop and members of the committee. Thank you for the opportunity to testify on this very important topic.

Unfortunately, little has changed in the Gulf region since my July 2010 study on the economic costs of a moratorium to the Gulf region. That study predicted a roughly $2 billion slowdown in economic activity in the Gulf states following the 6-month drilling moratorium in May 2010.

While it is difficult to disentangle the effect of just the moratorium after the fact, real GDP from oil and gas extraction in the four Gulf states measured in that study fell by $16 billion in 2009–2010, and remains $11 billion below 2009 real GDP in 2011.

Not much has changed for Louisiana in recent years. In 2012–2013, Louisiana real GDP from oil and gas extraction fell 16 percent, and in 2013–2014, it fell another 6 percent. States with more onshore focus grew considerably in 2014, but even the states that did well in recent years can be expected to slow in 2015 due to persistent low oil prices.

Amidst this industry difficulty, the Department of the Interior's BSEE recently published new requirements and procedures related to blowout prevention systems and well control. In strict economic terms, those requirements pose new costs for the offshore oil and gas industry at a time when high-cost production is being pushed out of the industry.

It should come as no surprise, therefore, that a recent American Petroleum Institute study of the potential impact of the proposed rule concluded that, "Under the new regulations, approximately 690 fewer wells are projected in the U.S. Gulf of Mexico between 2017 and 2030, a 26 percent decline in drilling activity."

From a pure economic perspective, increased costs should result in lower supply. Regression results in my written testimony suggest, however, that production declines associated with additional regulation may be costlier if there already exists a significant regulatory burden.

The direct results of production declines are, inevitably, fewer jobs, decreased wages, and lower economic growth. These effects will exacerbate competitive pressures in higher education as students, whether studying oil and gas, alternative energy, or compliance, are left without job prospects, and university programs without funding. Those funding shortfalls hurt research into new energy sources. The majority of Louisiana State University's externally-funded energy research is not associated with fossil fuels, but renewables. Moreover, that energy research funding is nearly equal to the total budget provided to the relevant colleges by the state of Louisiana. That research money is plugged back into course development and student support for education and workforce training and related fields.

LSU offers a number of degree majors and minors that are relevant to energy issues. Estimates suggest that almost 3,000 LSU undergraduate and graduate students study in energy-related fields. But program enrollment alone may severely understate the importance of workforce development to students in our region.

For instance, even without a dedicated program, some 18 percent of LSU business school grads go on to work in the oil and gas and energy sectors. Moreover, the college reports that LSU business graduates boast the highest mid-career earnings among peer institutions largely due to that energy industry employment. As a result, the College of Business, like many other academic units at LSU, is launching a variety of programs to prepare students for the opportunities and challenges presented in today's energy sector.

LSU also provides energy-related workforce development in the form of worker safety, continuing education, and various energy specialization programs focused on fossil fuels, as well as renewables. As noted by Mr. Herbst initially, LSU's workforce development programs are a vital component of safety and efficiency in today's energy industry.

In summary, LSU is inextricably intertwined with the energy industry and the Gulf of Mexico. Higher production costs will reduce grant funding, class offerings, and student placements. Further declines in higher education in Louisiana and similar states will be unavoidable. And ironically, a chief casualty of the slowdown will be research into clean and efficient energy sources to replace fossil fuels. I respectfully ask the Members present to please think hard about these dynamics before layering new offshore regulations on Gulf energy production. Thank you.

[The prepared statement of Dr. Mason follows:]

PREPARED STATEMENT OF JOSEPH R. MASON, LOUISIANA STATE UNIVERSITY [1]

Thank you for the opportunity to testify on this very important topic.

Unfortunately, little has changed in the Gulf region since my initial study on the "The Economic Cost of a Moratorium on Offshore Oil and Gas Exploration to the Gulf Region," in July 2010. Economic activity in the region is still moribund and the outlook for exploration and development remains subdued.

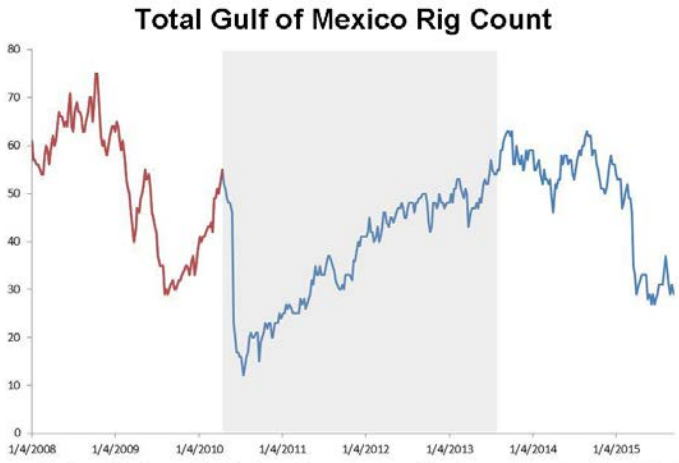
Now, more than 5 years after Deepwater Horizon, further restrictions are being considered for Gulf drilling operations. Those regulations, like the ones before them, will decrease production activity and the economic growth of the region.

Families will be impacted by lost jobs and wages and students—whether studying oil and gas, alternative energy, or compliance—will be left without job prospects. Such effects will continue to drag down growth in the Gulf Coast region relative to the rest of the country during this crucial period or economic uncertainty when the Federal Reserve is trying to get the economy back on track. Thus, imposing any new regulations at this time will have to be undertaken in a careful and thoughtful fashion in order to preserve jobs and livelihoods during a period of tenuous economic uncertainty.

THE STATE OF THE GULF OIL AND GAS INDUSTRY

My July 2010 study predicted a roughly $2 billion slowdown in economic activity in the Gulf states following the drilling moratorium in May 2010. While it is difficult to disentangle the effect of just the moratorium after the fact, real Louisiana GDP from Oil and Gas Extraction fell by $1.6 billion in 2010 remained another $1.3 billion below 2009 real GDP in 2011.

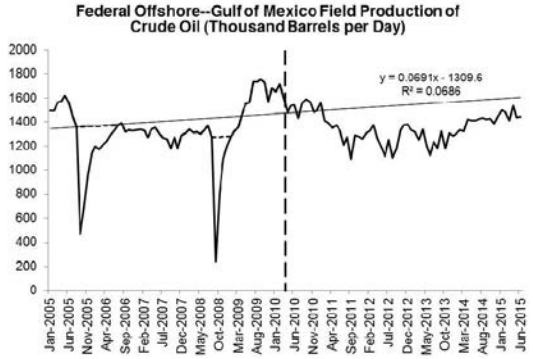
The reason for the slowdown is straightforward. The effects of regulatory actions taken after April 2010 were dramatic and long-lived. Pre-April 2010 rig counts in the Gulf of Mexico did not exceed April 2010 levels until July 2013, more than 3 years later.



Source: Baker Hughes, North American Rotary Rig Count, September 11, 2015.

Even after July 2013, however, rig counts in the Gulf of Mexico were not sustained and production has remained relatively flat. As a result, the Gulf of Mexico is still not back to pre-April 2010 production trend levels, measured relative to April 2010 as the midpoint to today.

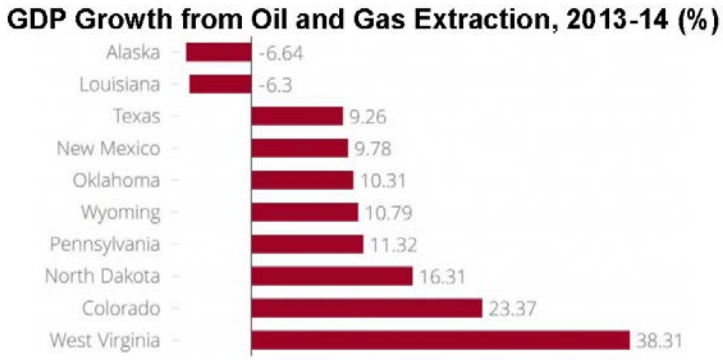
[1] Views expressed in this testimony are those of the author and do not necessarily reflect official positions of Louisiana State University.



Source: Energy Information Administration at http://tonto.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFP3FM2&f=M. Trend excludes the effects of hurricanes by linearly extrapolating production as represented by the dashed lines in the graph above.

We continue to see the impact of the post-April 2010 slowdown and more recent trends in local economic activity. Louisiana real GDP from Oil and Gas Extraction fell 15.9 percent in 2012–13 and another 6.3 percent in 2013–14.

Overall, states with offshore exposures are growing at a slower pace than those with more onshore focus. Preliminary 2014 GDP data from the Bureau of Economic Analysis shows that GDP from Oil and Gas Extraction slowed by 6.64 percent in Alaska and 6.30 percent in Louisiana, while activity grew by almost 10 percent or more in the other major oil-producing states with more onshore reserves.



Source: Bureau of Economic Analysis

Even the states that did well in 2014, however, can be expected to slow considerably in 2015 due to persistent low oil prices.

The Federal Reserve's September Beige Book, released September 2, 2015, noted that the energy industry has been flat in all of the regions its surveyed.

Since January 2015 to today, the Gulf of Mexico rig count has almost halved.

In its most recent report, the International Energy Agency now forecasts that oil production outside OPEC can be expected to decline by nearly 500,000 barrels a day next year, with the United States bearing some 80 percent of that decline. According to the IEA, "Oil's price collapse is closing down high-cost production from Eagle Ford in Texas to Russia and the North Sea . . . [The OPEC effort] to defend market share regardless of price appears to be having the intended effect."

Clearly, this is a difficult period for Louisiana and the U.S. Oil and Gas sector.

ANTICIPATED EFFECTS OF NEW REGULATIONS

Amidst this difficulty, the U.S. DOI Bureau of Safety and Environmental Enforcement (BSEE) recently published new requirements and procedures related

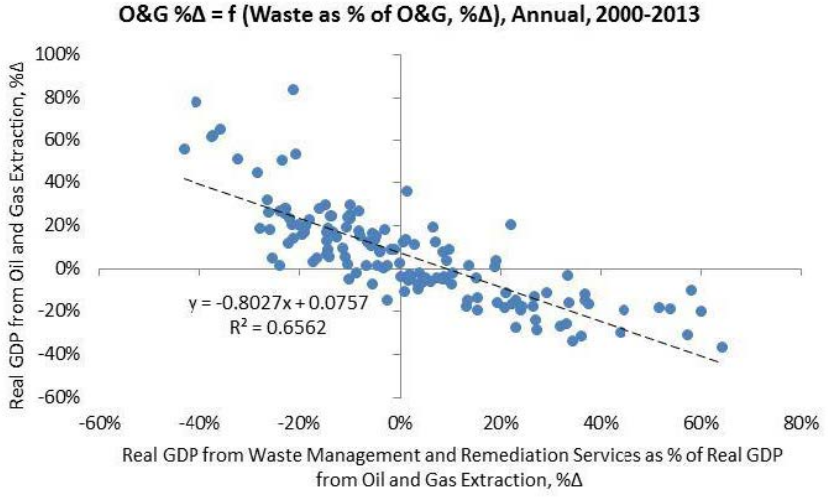
to the proposed rule "Oil and Gas and Sulphur Operations in the Outer Continental Shelf—Blowout Preventer Systems and Well Control." In economic terms, those requirements pose new costs for the offshore oil and gas industry at time when high-cost production is being pushed out of the industry.

A recent American Petroleum Institute (API) study to evaluate the potential cost and economic impact effects of the proposed rule on oil and gas drilling operations in the U.S. Gulf of Mexico concluded that, "[u]nder the new regulations, approximately around 690 fewer wells are projected to be drilled from 2017 to 2030, a 26 percent decline, with similar water depth distributions. Over the 10-year 2017 to 2026 period the projected number of wells projected not to be drilled equals around 470, with an average of 20 fewer exploration wells per year and 29 fewer development wells." ("BSEE Proposed Well Control Rule Cost and Economic Analysis," API, July 2015, at p. 26)

Such conclusions should come as no surprise. Quite simply, increased costs should result in lower supply. In order to demonstrate the universality of such a relationship, I regressed the percent growth in (real) state GDP from oil and gas extraction on the percent growth in (real) state GDP from waste management and remediation as a proportion of that from oil and gas extraction in the top 10 oil and gas-producing states annually, from 2000–2013.[2]

It is important to keep in mind that waste management and remediation comprises a wide range of activities, not just those related to oil and gas extraction.[4] Such breadth, however, should make it more difficult to find a significant relationship with oil and gas extraction.

The results, displayed below, are striking. On an annual basis, the growth in economic activity devoted to waste management and remediation has a strong and statistically significant negative effect on oil and gas production. The coefficient on waste management and remediation's effect on oil and gas production is just over 0.8, suggesting that an additional percent of economic activity related to waste management and remediation (as a percent of oil and gas extraction) reduces activity in oil and gas extraction by 0.8 percent.

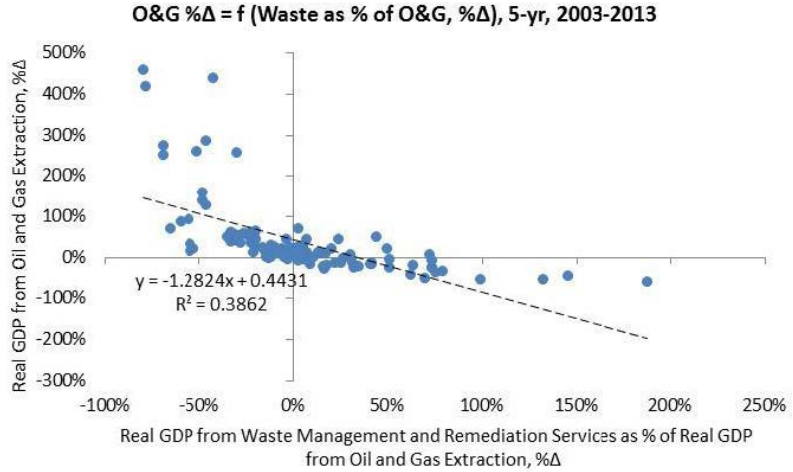


[2] The states used in the model are Alaska, Colorado, Louisiana, New Mexico, North Dakota, Oklahoma, Pennsylvania, Texas, West Virginia, and Wyoming. Data from 2000–2014 yields 140 observations. Data are from the Bureau of Economic Analysis.

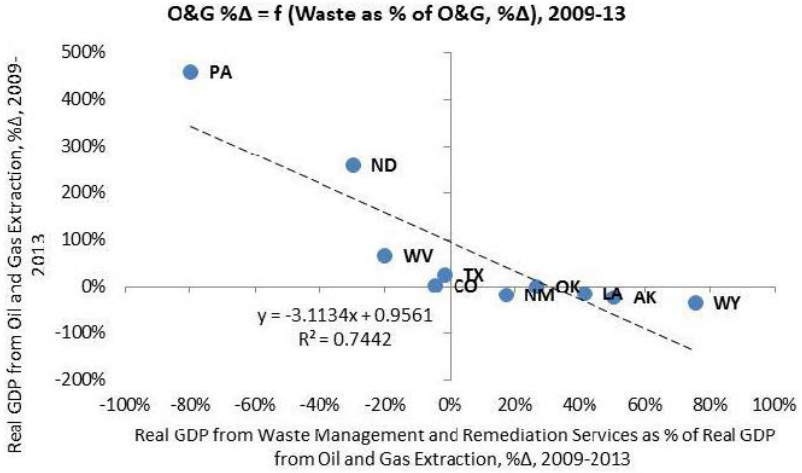
[3] "Businesses engaged in the collection, treatment, and disposal of waste materials. Includes businesses engaged in collecting and/or local hauling of waste and/or recyclable materials; operating waste treatment or disposal facilities (except sewer systems or sewage treatment facilities); operating materials recovery facilities (those that sort recyclable materials from the trash stream); providing remediation services (those that provide for the cleanup of contaminated buildings, mine sites, and soil or ground water); and providing septic pumping and other miscellaneous waste management services, such as portable toilet rental services." (See http://www.bea.gov/industry/pdf/2012_industry_code_guide.pdf)

One might expect, however, that if the source of growth in waste management and remediation is new regulation, then the effect on oil and gas extraction would strengthen with a longer time lag. That is exactly the result we see below, where instead of measuring the effect with annual changes to both variables I use changes over a 5-year period (resulting in 100 observations rather than 140).

The results below show that the coefficient magnitude in the relationship from 0.8 to just under 1.3, suggesting that a 5-year period captures more of the hypothesized effect.



Last, I examine how the relationship between economic activity in waste management and remediation and oil and gas extraction may have changed over time. The last panel suggests that in recent years, the relationship may have strengthened considerably, with the coefficient rising from just under 1.3 to 3.1, so that an additional percent of economic activity related to waste management and remediation (as a percent of oil and gas extraction) reduces activity in oil and gas extraction by 3.1 percent.



The results above cannot be considered a complete analysis of regulatory dynamics, but may constitute a set of results suggesting that each dollar of regulatory cost imposed upon the oil and gas industry may result in a larger cost than the last.

In economic parlance, the marginal cost of additional regulation may rise with existing regulation, rather than remaining constant. If that is the case, policymakers would want to be cognizant of existing costs before adding new ones.

HIGHER EDUCATION AND WORKFORCE IMPACTS

Like economic growth, employment growth in oil and gas extraction has lagged in Alaska and Louisiana relative to other oil-producing states. From 2009–2013, employment in oil and gas extraction has grown 27.84 percent in Louisiana and 30.76 percent in Alaska, relative to 43.03 percent in the other major oil producing states (Colorado, North Dakota, New Mexico, Oklahoma, Pennsylvania, Texas, Wyoming, and West Virginia).

Still, the oil and gas extraction sector is an important employment base in all of these states. Such importance is heightened by educational programs devoted to energy and the environment in all such states, as well as elsewhere in the United States.

Recently, Louisiana State University (LSU) reviewed the scope and extent of energy-related education and research at LSU. Like many universities, LSU's energy-related research spans a wide range of topics including upstream oil and natural gas drilling and production topics (including hydraulic fracturing), geology, solar, wind, biomass, geothermal, materials, efficiency, electrical conductivity, nuclear, environmental impacts, and socioeconomic impacts.

Research

While LSU is typically associated with oil and gas, the majority of LSU's externally funded energy research is not associated with fossil fuels but renewables.

Summary of LSU Energy-related Research by Topic Area

Topical Area	Funding	Percent of Total	Number of Projects	Average Award per Project
Environment	$ 17,297,166	18%	43	$ 402,260
Fossil Fuels	$ 14,506,904	15%	43	$ 337,370
Materials	$ 18,815,701	19%	25	$ 752,628
Renewable	$ 43,019,831	44%	29	$ 1,483,442
Other	$ 4,288,593	4%	13	$ 329,892
Total	**$ 97,928,195**	**100%**	**153**	**$ 640,054**
Note:"Other" includes aerospace, electricity, nuclear and socioeconomic.				

Source: LSU Office of Research and Economic Development

LSU's renewable energy research, estimated at close to $43 million over the past 7 years, accounted for almost half (44 percent) of all energy-related research. Materials science-based energy research accounted for close to $19 million, or 19 percent, of LSU's total energy research funding over the past 7 years. Research associated with energy and the environment is estimated to be the third-largest research topic, accounting for close to $17 million in externally funded energy projects over the past 7 years. Fossil fuels research come in last, behind those three areas.

LSU College Budgets and External Energy Research Funding

College/Research Unit	Budget (FY 2014/15)	Research Funding (2007-2014)	Percent of Total
Agriculture	$ 7,488,438	$ 38,642,116	516%
Art & Design	$ 6,945,356	$ 2,460,000	35%
Business*	$ 16,999,443	$ 1,257,973	7%
Center for Energy Studies	$ 1,953,889	$ 4,492,286	230%
Coast & Envinronment	$ 6,201,707	$ 12,033,649	194%
College of Science	$ 37,172,392	$ 6,328,234	17%
Engineering	$ 23,035,977	$ 32,713,937	142%
Total	**$ 99,797,202**	**$ 97,928,195**	**98%**
*State operating budget FY2013/14			

Source: LSU Office of Research and Economic Development

The academic units involved in such research vary widely, as well. LSU's College of Agriculture accounted for 39 percent of energy-related research funds ($38.6 million) in the past 7 years. The College of Engineering has generated the second-largest level of externally funded energy research. The School of the Coast & Environment generated the third-largest level of externally funded energy research at $12 million over the past 7 years.

The College of Science is estimated to have generated over $6.3 million in external funding for research projects in the past 7 years, while the Center for Energy Studies has been awarded approximately $4.5 million in externally funded research.

LSU's School of Art & Design contributes to work on coastal sustainability and the E.J. Ourso College of Business maintains a variety of programs related to Environmental Economics and Emissions Trading.

The table above also shows that external funding for energy research approximately equals all of the University funding, in the aggregate, for the colleges involved.

Teaching

Much of that money is plugged back into course development and student support for education and workforce training in those fields. LSU offers a number of degrees and minors/concentrations that are relevant to energy issues. Relevant degrees include those in engineering (petroleum, electrical, chemical, agricultural and biological, and mechanical), law, geology, basic sciences, environmental science, and oceanography/coastal sciences.

Energy-relevant undergraduate and graduate courses are taught in the areas of fossil fuels, renewable sources, electricity, nuclear energy, and law. Most fossil fuels courses are taught in Engineering, Geology & Geophysics, and similar departments. Courses on renewables are taught in Agricultural Economics, Civil Engineering, Chemical Engineering, Economics, Environmental Sciences, Petroleum Engineering, and the School of Renewable Natural Resources. Electricity-related courses are offered in Chemical, Mechanical, and Electrical engineering. Nuclear classes are in the Department of Mechanical & Industrial Engineering and the Nuclear Science Minor in the College of Science. Finally, courses on energy law are taught at both Environmental Science and the Law Center.

Enrollment in energy-related courses is strong. Estimates suggest that roughly 10 percent (almost 3,000) LSU Undergraduate and Graduate students study energy-related fields. About half of those engaged in such study do so through the Petroleum Engineering program, with the remainder distributed across Agriculture, Art & Design, Gulf Coast & Environment, Science, Law, and Business.

Many new initiatives are taking shape at LSU, as well. The College of Business is launching a specialization in energy studies, including courses such as Energy Economics Policy, Petroleum Accounting, and Product Lifecycle Management, plus courses offered in the College of Engineering, College of Science, and School of the Coast & Environment. Similarly, the Law School offers a Graduate Certificate in Energy Law and Policy to officially recognize students who have demonstrated substantial competence in the study of energy law and related subject matter.

Enrollment in energy courses and certificates and majors related to energy, however, may severely understate the importance of workforce development to students in our region. For instance, even though the College of Business energy courses are relatively new to the University, Bloomberg reports that 18 percent of LSU business

school grads go the oil & gas and energy sectors. In contrast, the next highest sectoral concentration, 15 percent, goes to financial services. The top recruiters of LSU business grads are reported to be Ernst & Young LLP, Postlethwaite & Netterville APAC, ExxonMobil, and Shell. The College of Business reports that their graduates boast the highest mid-career earnings among peer institutions, largely due to energy industry employment.

Workforce Development

LSU also undertakes many energy-related initiatives focusing on workforce development, worker safety, continuing education, and various energy specializations.

For instance, the Petroleum Engineering Research and Technology Transfer (PERTT) Laboratory conducts training at an industrial-scale facility for future oil industry employees. The Donald and Gayle Keller Building provides a classroom and computer lab for professional training. In 2009, in partnership with Entergy Corporation, LSU initiated a Nuclear Power Workforce Development Program. The Nuclear Power Workforce Development Program works in conjunction with the Medical Physics and Health Physics program, which offers classes in radiation protection, exposure evaluation, and nuclear facility safety.

LSU also offers continuing education programs to professionals in a variety of energy-related fields. For example, LSU's Continuing Education office offers a Certified Occupational Safety Specialist program for which participants receive a 10-hour Occupational Safety and Health Administration (OSHA) completion card. The Mineral Law Institute's annual symposiums offer continuing education credits for lawyers and other professionals, such as certified engineers and city planners. A large number of sessions at conferences held by the Center for Energy Studies are also registered for continuing legal education. The Department of Petroleum Engineering works with the Society of Petroleum Engineers to offer short courses and continuing education credits, including Professional Ethics for Petroleum Engineers and Mechanical Tubing Forces: Temperature, Ballooning, Piston, and Buckling Effects. The Department of Chemical Engineering also offers an online course Essentials of Chemical Engineering for Non-Chemical Engineers.

Thus, LSU is inextricably intertwined with the energy industry and the Gulf of Mexico. Higher production costs will reduce grant funding, class offerings, and student placements. Existing professionals who may be laid off will not need certifications or continuing education. Further declines in higher education in Louisiana and similar states will be unavoidable.

SUMMARY AND CONCLUSIONS

Energy production in the Gulf of Mexico is still hobbled by the drilling restrictions put in place after April 2010. Since then, OPEC's competitive strategy continues to depress oil prices worldwide, resulting in the current state of the industry in which the economics of production are expected to break within the next year.

As I have testified previously, any regulatory policy that raises pecuniary and/or nonpecuniary costs will slow production. Production will inevitably decline in response to higher costs and greater political uncertainty. In both cases, that means less jobs, lower wages, and lower GDP growth than would otherwise occur. Those immutable laws of economics will bind whether policymakers like them or not. And in today's competitive environment, higher U.S. production costs will drive more market share to OPEC, just as their leaders hope.

Slow economic growth hurts further development of clean energy. (After all, why make it if nobody can afford it?) The stress of higher costs put upon local economies like that of Louisiana actually *hurts* the development of new clean energy sources. University research like that at LSU is driving the next generation of clean energy. We need a smooth regulatory and research policy path to a clean energy world, lest we stay stuck in the mire of economic recession that prevents the conversion to the new energy sources we all hold dear.

The CHAIRMAN. Thank you.

I appreciate the testimony of all the witnesses. I appreciate you coming here. I was going to say I appreciate you coming so far, but I realize I came a lot farther than all of you to be here. But I thank you for your testimony.

We are now going to turn to the committee for questions. The committee members, once again, each have 5 minutes to ask questions, and we will go through as many rounds as we can possibly fit in today.

I will go last. I will start with Chairman Fleming, if you would like to ask the first series of questions.

Mr. FLEMING. Thank you, Mr. Chairman.

I thank the panel for being here today.

Mr. Leimkuhler, I would like to ask you some questions. My personal background is that I am a physician from the private sector, but also I have been serving in Congress since 2009. I have observed that regulations, increased regulations, and more complicated or expensive regulations, don't necessarily translate to more safety.

So, what I would like to ask you about is this. In your testimony, you differentiated between performance-based regulations and prescriptive regulations. For example, real-time monitoring sounds like a good thing to have. But many of those who commented on the rule believe it will make operations less safe.

What do you have to say about that?

Mr. LEIMKUHLER. First off, I think that is a good point. When it comes to real-time monitoring, I fully support it. But I feel that all the companies should be challenged to perform and demonstrate to the regulator how do we effectively use real-time monitoring to ensure we are running a safe operation, and the current regulatory proposed rule has in it the mandate that you——

The CHAIRMAN. Mr. Leimkuhler, can I just ask you to pull that microphone right to your mouth?

Mr. LEIMKUHLER. I'm sorry.

The CHAIRMAN. Yes, it is much better to hear you that way.

Mr. LEIMKUHLER. So, real-time monitoring I think is a great example to demonstrate how performance-based regulations should be applied, as opposed to prescriptive. The proposed Well Control Rule requires us within 3 years to build a brick-and-mortar, on-site center, or lease one, and staff that with staff who will monitor the data feed coming in from offshore. That absolutely should be done. Real-time monitoring I think should be a requirement. But the companies should be given the challenge to show the regulator how do you perform to meet that standard.

At LLOG, we have real-time monitoring. We employ mud loggers offshore, on-site for every one of our——

Mr. FLEMING. Well, let me be clear. I want to clarify. Do you believe that real-time monitoring is better than prescriptive requirements, or do you think a combination? I just want to be clear where you stand on that.

Mr. LEIMKUHLER. I am in favor of real-time monitoring, but I don't like the prescriptive nature of how I am directed to achieve it. I should be given the latitude to demonstrate to the regulator that we monitor operations properly, we monitor continuously, we have back-up. We do that. But we don't use a brick-and-mortar real-time center. We have data streams, feeds that come in to myself, my whole entire staff. We have the capability to properly monitor operations, and I would like to demonstrate that.

Mr. FLEMING. OK. Let me interrupt you because I have limited time, but I have other questions. I appreciate your answer there.

Can you describe the current safety standards for blowout prevention and the BSEE new regulation? How does the BSEE regulation increase risk?

Mr. LEIMKUHLER. Relative to BOPs, I feel one of the bigger impacts is at places that exceed API–53, which is the new BOP standard. I think that should be a requirement in the regulations. But in places where it exceeds it, with respect to BOPs, would be the 5-year demonstration of integrity of the system. Right now, the way the regulation is written, we have to take the BOPs fully out of commission. And rather than ensure every single component in that system has a valid certificate of inspection from the original manufacturer within 5 years, we have to take the whole system out of service every 5 years, which could potentially take rigs out of service for up to 6 months to get that work done.

Mr. FLEMING. The report I have is, if finalized as written, 110 of the 175 wells, or 63 percent, that already have been safely drilled post-Macondo in the Gulf would fail to be in compliance with provisions. Is that what you are referring to?

Mr. LEIMKUHLER. No, I am not. That is in reference to the drilling margin portion of the rule rather than in reference to the BOP systems themselves. With regard to the drilling margin rule, API has come up with a document called 92L, which was developed rather quickly in response to the request of the regulator to regulate drilling margins. It encompasses the best practices that industry experts have come up with as to how you drill safely in the Gulf of Mexico, which is a rather unique drilling environment, rather than the prescriptive margin of always maintaining a certain distance between the weight of your fluid and the strength of the rock.

Mr. FLEMING. OK. Real quickly, I want to shift to Professor Mason.

You said your research shows an economic impact of increased regulation in the Gulf following 2010. In your opinion, what actions were most devastating that were taken in terms of economic effect?

The CHAIRMAN. And you have 15 seconds to do it.

Dr. MASON. I only measured the shutdown and drilling activity as a result of the moratorium. I didn't go beyond that.

Mr. FLEMING. OK. Thank you.

My time is up and I yield back.

The CHAIRMAN. That was within 15 seconds. I am impressed.

Let me turn to another co-host here today, Congressman Graves, for the next round of questioning.

Mr. GRAVES. Thank you, Mr. Chairman.

Mr. Herbst, thank you for being here. I have a couple of questions for you. But first of all, I want to talk briefly about the macro perspective.

We have seen energy prices at record lows right now relative to previous performance, and obviously the cost of producing energy in the offshore is a substantial investment and one, as you noted, that is often determined in excess of a decade in advance of actual production.

When you combine what is going on right now—OPEC nations, led by Saudi Arabia, are continuing to flood the market. When you

look at some of the other actions of this Administration, with regard to the Iran agreement, that is going to allow for hundreds of millions of barrels of additional oil to be put on the market.

I want to make note, Mr. Chairman, that I don't remember seeing a greenhouse gas evaluation by this Administration in regard to the Iran agreement, as was done with the Keystone Pipeline.

The point here is you are seeing extraordinary price pressures. We are seeing right now folks getting pink slips all over the Gulf of Mexico, and Senator Vitter and Senator Cassidy noted all the associated employment opportunities related to offshore oil and gas production. Importantly, I have heard the statistic over and over again that offshore energy production is the second-largest revenue stream for the U.S. Treasury outside of taxes, a big revenue stream for the U.S. Treasury. And as I recall, we are approaching nearly $200 billion in funds for the U.S. Treasury from offshore energy production, the majority, the far majority of which, you are well aware, is produced offshore the coast of Louisiana.

As Senator Cassidy noted, the implications of this are not limited to just taxpayers, not limited to the U.S. Treasury. The implications of this rule, if it continues to cause a reduction in offshore energy production—and I remind you, in 2009, 30 percent of all the domestic crude produced in the United States was produced in the Gulf of Mexico. Today, it is down to 17 percent. Historically, I believe it was 11 percent of all the domestic gas production was in the Gulf of Mexico. It is down to 5 percent today.

As Senator Cassidy noted, these revenue streams are actually coming back to the state of Louisiana to restore our coast, to help protect our environment, our ecological productivity here. This rule is going to prevent those investments in the environment. As Dr. Mason noted, in addition it will prevent our investment in higher education.

The first question I have for you is this. As I understand it, the offshore industry, on their own, voluntarily worked on over 100 changes, updates, and safety procedures since the Macondo disaster. Can you just rattle off about five of those for me?

Mr. HERBST. Again, it is a good question, and a big part of this rule is about adopting those changes that industry did move quickly on as far as making changes to API and——

Mr. GRAVES. Could you just rattle off about five of them for me?

Mr. HERBST. The RP–53 went to Standard 53. That was a change. I believe the API–11 document was also changed.

I have them right here—1 minute.

Mr. GRAVES. My point is this, Mr. Herbst. I can pull out a document and rattle off all 100 of them if I wanted to. Here is the point I am trying to make. We have an industry that has hundreds of billions of dollars in investment. As was noted by one of the witnesses, in some cases, the rental rates of these platforms go for $1 million a day. These are the folks that are out there on the ground understanding the implications.

If you have to pull out a list—and again, I can do it too, and read off all 100 of these things—it indicates a lack of intimate understanding or knowledge of what the industry is actually doing. My concern is that the Department of the Interior—and I know you didn't do this, I know that this came from DC, I have known your

work for years and appreciate your service—but the frustration or the concern I have is that you have folks sitting in an ivory tower who are sitting and writing these regulations, that have no understanding of what is actually happening on the ground, the implication to our environment here in Louisiana, the implications to our workforce here in Louisiana. I think that disconnect is very, very dangerous, and I urge you to take that back.

Mr. Henderson, I actually want to commend you. You may be surprised to hear that, but I want to commend you, because I actually agree that we need to ensure and we need to work with the Department of the Interior. We need to make sure that we have the safest regulatory environment that we can possibly have. I also think it is really important to point out, though, Mr. Henderson, that the judge in the case of the Macondo spill determined that there was gross negligence, willful misconduct, determined there was a climate of profit-driven decisions, OK?

When you look historically at the trends, you have seen a trend of a decrease in the total number of spills that have occurred in the Gulf of Mexico, and you have seen a decrease in the total volume of oil that has been spilled. I agree with you that OPENS needs to be updated; a lot of changes from Macondo have resulted. But whenever you went out—you noted all the NRC filings that you did—when you went out and monitored these areas to find the spills, how did you get out there?

Mr. HENDERSON. Sometimes by plane, sometimes by boat, and sometimes by foot.

Mr. GRAVES. And those boats and planes were solar powered?

Mr. HENDERSON. No, absolutely not.

Mr. GRAVES. Thank you.

Thank you, Mr. Chairman.

Mr. HENDERSON. That is not my fault, though.

The CHAIRMAN. Mr. Westerman.

Mr. WESTERMAN. Thank you, Mr. Chairman, and thank you to the panel for the informative presentations today.

I am from Arkansas. We don't have much offshore exploration in Arkansas, but I am trying to get up to speed on this as much as possible. I have been reviewing the process, and I notice that BSEE has collaborative agreements with at least 12 other agencies through Memorandums of Understanding, Memorandums of Agreement, and interagency arrangements. It seems like a very cumbersome and complicated process in a lot of areas where regulation takes place on the industry.

Mr. Herbst, you said you were a chemical engineer and a professional engineer. I am also a professional engineer, so I understand a little bit about how technology works. Also, I know as a professional engineer, one of our foremost objectives is to protect the public safety, health, and welfare.

It has been interesting in committee meetings in DC when EPA comes in, who is one of your collaborators in the Federal agencies. They always talk about public health, safety, and welfare. Last week, we had a hearing on the Animus River chemical spill. Through the hearing it was pretty obvious that the EPA was very negligent of their responsibility in protecting the public health, safety, and welfare; and I believe had it been a private company

that was as negligent as EPA was, that there would be a huge outcry over that.

When we look at this Well Control Rule, the blowout prevention regulations, they are very prescriptive. To my understanding, there is technology there that is not even proven yet, and these rules were developed by you guys. We heard testimony about how the industry has increased their safety requirements through API rules.

When I was in engineering school, they taught us that when you are writing specifications, you specify results and you don't get real descriptive in your specifications, because when you specify very descriptively, you are actually specifying the design of this equipment. It sounds like you are doing that on the blowout preventers. So with that, you take on the liability of the design.

So, is BSEE prepared to fully warrant or fully back up the blowout preventer designs that they are proposing in the well, and to take full liability for those in case they are put into place and they happen to fail or there are problems with them?

Mr. HERBST. Well, let me answer it this way. Again, the recommendations that came in after Macondo were from various groups—one of those was the National Academy of Engineers, various other groups, and industry input. This rule reflects that input. Much of the rule, again, reflects industry changes. We mentioned API Standard 53. Many of the requirements, if you think of them as prescriptive, come from that Standard 53.

Now, clearly there are other ones where we are trying to push that safety bar a little bit further, realizing we deal with 80 different operators, everything from a super major to small—I call them mom and pop type organizations. It is important to set some bar, whether it is prescriptive or not, so that they can meet that bar.

Now, again, some of the requirements in here have dates of implementation further out—3 years, 5 years, 7 years—and some of them are performance based. So, yes, we want a BOP stack to be able to center the pipe so it can be sheared properly. We did not tell them how to center the pipe. We did not tell them that another requirement is that you must shear everything in the hole. We didn't tell them that that has to be a shear ram. It could be some other type of device, explosive device that can shear the pipe.

So, we did leave areas open, and that is what my remarks said, that it is both prescriptive and performance.

Mr. WESTERMAN. I am running short on time here.

Mr. Leimkuhler, do you believe the industry or BSEE has more expertise in well design? And, can you briefly share some examples of how provisions in the Well Control Rule actually undermine safe operations rather than enhance the current safety culture that we see in the Gulf? Also, do you feel like BSEE has worked as closely with industry on these rules as they should?

Mr. LEIMKUHLER. That's quite a few questions there. To answer the first question——

Mr. WESTERMAN. Fourteen seconds.

Mr. LEIMKUHLER. I feel like industry obviously has a greater level of expertise when it comes to well design. When it comes to how that design actually applies to the regulations that are in

place, they are certainly the experts there. We worked jointly together to really come up with, in my view, a very good product.

With regards to the regulations and impacting our business, I think the drilling margin is probably a good example, whereby if we apply our conventional standards that we have applied throughout our learnings of deepwater drilling in the Gulf of Mexico, I think those have all been codified quite well in API–92 versus the prescriptive half-pound per gallon drilling margin rule.

The CHAIRMAN. I do need to cut you off here. Your answer should have just been yes.

Mr. LEIMKUHLER. OK.

The CHAIRMAN. You are out of time. I am sorry. We will come back again here.

Mr. Smith, it is good to have you back with our committee. You are recognized now for some questions.

Mr. SMITH. Thank you, Mr. Chairman. It is a pleasure to be here. It is a pleasure to just be south of the river. I am up from just north of here, in southeastern Missouri. We are right along the Mississippi about 200 miles, so we just have to float down and we are right here.

I am very curious, Mr. Herbst, what is the projected compliance cost of the proposed rule?

Mr. HERBST. You are talking about BSEE's cost in the rule? I believe, just under $1 billion was the estimate.

Mr. SMITH. Just under $1 billion?

Mr. HERBST. Yes. That is over a 10-year period, I believe.

Mr. SMITH. Over a 10-year period? How do you respond to, I believe it was Senator Cassidy that started in the first panel that said, that industry has calculated a cost of nearly $32 billion over 10 years?

Mr. HERBST. Right. So, part of moving from proposed rule to final rule, we asked for comments specifically on costs. We are looking at those costs, and I can tell you that one of the costs for industry came up with $32 billion; $10 billion of that alone is tied to the drilling margin issue. So, obviously, that is one this week that we are meeting with industry in Washington to try to see if we can still meet that objective, but maybe in a less prescriptive manner.

There are tremendous costs that industry has pointed out there, so we are working to see those costs. Again, they may be the experts on some of these costs. We will have to sit and look at that. We will have to look at the final rule. Again, I expect there will be some changes from proposed rule to final rule. When that occurs, we have to look at those cost impacts again.

Mr. SMITH. To me, between $32 billion and $1 billion, that is a lot of billions that are out there in trying to figure out an estimated cost.

Would you accurately say that the $1 billion proposal projected cost is appropriate and necessary for the rules that you are trying to implement?

Mr. HERBST. Again, our $1 billion cost does take into account the benefits of the rule as well. Some of the costs are offset by the benefits. So, those safety benefits of a blowout incident such as Macondo and the lives lost and the environmental damage, that is

taken into account on the benefit side of our analysis. I don't believe that industry's analysis took that into account.

Mr. SMITH. Would you say you do believe it is appropriate and necessary?

Mr. HERBST. Again, we will have to look at the final rule and what the final costs are before we can make that determination, or I could make the call on that.

Mr. SMITH. OK. So right now, we are trying to decide if it is between $880 million or $32 billion in the cost.

I do want to point out to the agency that I would remind them to look at Justice Scalia's opinion in *Michigan v. EPA*, which was a Supreme Court case this June. In that decision, Justice Scalia was writing the opinion of the court, and it stated, "The agency must consider cost, including, most importantly, cost of compliance, before describing whether regulation is appropriate and necessary." That is the supreme law of the land that was decided in the last week in June of this year, and I hope your agency can decide and understand whether it is $880 million or whether it is $32 billion and whether it is appropriate and necessary when you are looking at the offshore production just here in the Gulf of Mexico being roughly 17 percent, as what my colleague, Mr. Graves from Louisiana, was saying.

I have been here the last few days. We don't have offshore oil drilling in Missouri, but we are very glad that we have it here in the Gulf of Mexico, because it drastically affects the economy for the Nation, and it affects the economy for the world, for that matter. We need to make sure that we have a fair balance between the environment and safety and industry.

I can tell you just from a fishing perspective, being here over the weekend, I have not seen such a great production of fishing. Whenever you look at the No. 1 commercial fishing industry in the continental United States, right here next to the oil rigs, I would say environment and industry is going hand in hand. I would hope that your agency would promote that and not hinder that.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Mr. Rice, good to have you here. You are recognized for 5 minutes.

Mr. RICE. Thank you so much. It is my great honor to be here, Mr. Chairman. Thank you for having me.

Mr. Graves, thank you for having me.

I am not on this committee. I am from Myrtle Beach, South Carolina, which is a big tourism area, and we are considering opening the Atlantic offshore for drilling. My community is very concerned about it, which is why I am here, to learn a lot more.

Mr. Henderson, I want to start with you. Is it your position that no offshore drilling is safe? A really quick answer.

Mr. HENDERSON. No, sir, it is not.

Mr. RICE. OK.

Mr. HENDERSON. I am not naïve enough to dismiss the importance that oil and gas exploration has meant for the United States.

Mr. RICE. Is there anybody who——

Mr. HENDERSON. My grandfather protected oil in World War II. I understand the importance of it.

Mr. RICE. All right. Is it your position that there is no deepwater—that we should shut off deepwater drilling?

Mr. HENDERSON. Absolutely not.

Mr. RICE. OK, good.

Mr. Herbst, I want to talk to you for just a few minutes. You say that increased production and increased safety are not mutually exclusive. I think I heard you say that, right?

Mr. HERBST. That is correct.

Mr. RICE. So, you think we can do this, and we can do this in a safe manner.

Mr. HERBST. Certainly.

Mr. RICE. Ms. Davis, certainly you believe that there needs to be a little more control to prevent, I would think, the Macondo-type incidents from occurring. Would you not agree with that?

Ms. DAVIS. I agree there was a loss of life, and that is something you can never get back. I think, respectively, we know we have to do things in a safer manner. But we have always worked in this industry and we have been very safe. When that occurred, it was a terrible, terrible accident. We hope we never have to do it again.

Mr. RICE. Are you saying that we should just leave it to industry to self-impose additional safety measures, that the government should have no role in that? Is that what you are saying?

Ms. DAVIS. No, sir. I think industry and government should work collaboratively together to come up with solutions that are going to be viable for the industry.

Mr. RICE. So, you agree that there should be some additional level of oversight, but the proposed rule is far beyond what you agree with?

Ms. DAVIS. I don't know that it needs to be additional oversight. I think there needs to be some clarity in the ruling.

Mr. RICE. OK.

Mr.—I can't say your name—Leimkuhler?

Mr. LEIMKUHLER. That is closer than most get.

Mr. RICE. Would you agree with that, that there should be some additional oversight after Macondo?

Mr. LEIMKUHLER. I think so. I think, clearly, and it has happened. Clearly, it should have been, and it happened.

Mr. RICE. OK.

Mr. LEIMKUHLER. We have——

Mr. RICE. Do you think that we can do this drilling, and do it in a safe manner, protect the environment with reasonable protections for people, and still continue to increase production?

Mr. LEIMKUHLER. Absolutely.

Mr. RICE. Mr. Herbst, this Well Control Rule, is this your graph here—the losses of well control incidents in the Gulf of Mexico 2008? Is this your graph?

Mr. HERBST. Yes, that is BSEE's graph from the annual report.

Mr. RICE. That is a little scary to me. From 2008, we have eight loss of well control incidents. In 2013, we had eight; and in 2014, we have seven. Are you saying that even with these additional measures that have been imposed, that we are continuing to have loss of control of wells at the same rate as before?

Mr. HERBST. Not to be too alarming, you have to look at the definition of loss of well control. That can be a very small release

where the well is not under control. We are not talking about the things like Macondo where there was only one——

Mr. RICE. So, when you are speaking of losses of well control, in orders of magnitude, there has been nothing that approaches Macondo; correct?

Mr. HERBST. Nothing to the loss of life or pollution.

Mr. RICE. OK. All right.

Mr. HENDERSON. Mr. Rice, if I may clarify my response to your question, if I were in your position——

Mr. RICE. A very short time.

Mr. HENDERSON. Yes, very short. I would absolutely not support deepwater drilling off the coast of South Carolina.

Mr. RICE. OK. Thank you, sir.

Mr. Leimkuhler, do you agree with that? Do you think the Atlantic should be opened to offshore drilling?

Mr. LEIMKUHLER. No, I do not agree with that. I think it should be opened to offshore drilling. I think there needs to be allowances made, given the population density on the coastline. There ought to be a certain offset that should be enforced.

Mr. RICE. Ms. Davis, do you agree with that? Do you think the Atlantic should be opened to offshore drilling? Yes or no?

Ms. DAVIS. I think opportunity should be allowed.

Mr. RICE. Dr. Mason, I have 13 seconds left.

Dr. MASON. Yes.

Mr. RICE. Mr. Herbst, do you think the Atlantic should be opened to offshore drilling?

Mr. HERBST. I believe with input from the states, yes.

Mr. RICE. Thank you.

Mr. HENDERSON. One last comment, if I may.

Mr. RICE. I yield my time. My time has expired. Thank you.

Mr. HENDERSON. All it takes is one disaster to destroy the beaches in Myrtle Beach.

The CHAIRMAN. Let me ask a couple of questions.

Ms. Davis, if I can zero in on you—apologies for that, but there has been a general consensus from public comments we have had that a Well Control Rule could lead to another shutdown of the kind in the Gulf if it was enacted as it is currently written.

You kept your business afloat during the last shutdown. What would be the business impact if there was another shutdown so close on the heels of the last one?

Ms. DAVIS. Mr. Chairman, we lost 70 percent of our business as a result of the shutdown the last time with the moratorium, 70 percent, because we worked in deepwater primarily, and our company was a small business that felt that was a great place to work in the future. If you worked there, you were in a really good position.

If that were to happen today with the low price of oil, compounded with a tragedy, I just don't know what the implications would be. But we are survivors. We have worked through many, many challenges. I think we would still be here. We would find a way to work.

The CHAIRMAN. In your testimony, you also talked about the diverse business environment that fosters small entrepreneurs and that could become extinct. Could you just expand on that? Explain

how Federal regulations could actually be threatening to small business.

Ms. DAVIS. Well, in my experience, small business, we work under different programs because of government allowances for small, minority, women-owned business opportunities. It gives us a great leverage to be able to work in the industry. It is not the primary reason you work in the industry, but it is considered. Small business is a big part of this great country.

So I think, from my perspective, we have to be able to continue to be allowed to work. We are reinventing ourselves today as things change. We are looking for new opportunities, new product lines to explore, and new ways to do business. We will continue to operate. Small businesses will suffer, but people are resilient. They will find a way to work through it.

The CHAIRMAN. I appreciate that optimism in what the future can bring. Unfortunately, sometimes when we have prescriptive rules that lock in a procedure, it doesn't allow for change even if that change is positive. I know Dr. Mason realizes this. I am in education as well. Education is very slow to change. Government is a whole lot worse; so we need to do that.

Mr. Leimkuhler, if I could ask you about these changes.

By the way, it is a good German name. I understand it, a good German name.

Offshore operators have undergone a myriad of changes and new safety requirements. How would the Well Control Rule be different from the other regulations you have had to go through in the last 5 years?

Mr. LEIMKUHLER. I think the biggest challenge would be, once again, to get us back to that drilling margin. If you take a look at that margin and you apply that to the operational procedures LLOG has used in our wells in the past, I apply that to the next 5 years and I've gotten with the reservoir engineers and said, OK, if we can no longer drill these depleted zones, we can put a well into a zone as soon as it starts to deplete, putting in additional wells would be an extreme challenge to us. Our estimates are that that would remove 12 sidetracks from our approved plans, as well as four new wells. The total production of those five would be a reduction in Federal royalty money of about $900 million over 5 years.

The CHAIRMAN. What about the concept, though, of safety here? Could this rule undermine safe operations rather than enhance them?

Mr. LEIMKUHLER. It is possible. You can, because what that is going to do, it is going to encourage operators to resist raising your mud weight to maintain that margin. In the past, when you would have gone into that area and ran it that close, you are going to increase the probability that you will take a kick, and decrease the probability you will take loss per turns.

The CHAIRMAN. I have a limited amount of time here. I would like to talk about how OPEC is playing around in this area and the impact that it is having, both in the real world and the private sector. Dr. Mason, let me just talk to you very briefly here about what LSU is doing and what you were saying about the workforce.

As I understand it, the workforce off the coast is an aging workforce. It needs to be replaced. These are good-paying jobs, but we need to have Americans that are trained to be able to take this, and that is what you are trying to do. I understand part of your argument was if we cut the production by regulation, which is, as you said, as viable as market forces, what we are doing is stopping the amount of money that we can invest in education to produce that workforce. Is that what you are saying? This becomes a vicious cycle.

Dr. MASON. Yes, it becomes a vicious cycle, and as you noted earlier, it creates an entire career track and industry in compliance, with compliance being the new growth industry rather than the actual production.

The CHAIRMAN. I would just say, I have 15 seconds. You said the LSU funding comes from renewable energy sources? Did I mishear you?

Dr. MASON. The funding goes primarily toward research in renewables.

The CHAIRMAN. Goes to research. Thank you.

Dr. MASON. Although it does come from renewable and other sources that are usually not fossil fuels.

The CHAIRMAN. That is OK. I just misheard.

We have time for another round of questions here.

Dr. Fleming.

Mr. FLEMING. Yes, thank you, Mr. Chairman.

I just want to drill down a bit on what we have learned, amalgamate the baseline of information today, and I want to focus on Mr. Leimkuhler and Mr. Herbst.

Mr. Leimkuhler, based on the regulations as we know them to be today, and they are not finalized, at least we don't know for certain that these are going to be the final rules, is this going to affect your ability prospectively to drill more wells productively and economically?

Mr. LEIMKUHLER. I believe it will. I think it will probably take from 15 to 20 percent of the wells that are currently in my approved plans and restrict my ability to execute and drill those wells.

Mr. FLEMING. OK. Do you see that having a negative impact on price; that is, causing increase in prices to consumers?

Mr. LEIMKUHLER. In the past, to be honest with you, I don't think it has. But what we are seeing right now is the U.S. oil price totally dominated by supply and demand, and if you are going to take that production off the market, then it is going to be oil that is not there. In the past, I thought that oil was dominated by OPEC, but that the rise in U.S. oil production, reaching the levels it has, that if we restrict U.S. production, I think we will see an increase in price.

Mr. FLEMING. Mr. Herbst, we are really talking about prospective versus real-time evaluation and regulation. How flexible, how compliant do you think BSEE will be going forward to take the input from the industry's real experts, the engineers who are expert in this, and to fashion those regulations in the final written draft in a way that is not going to cause 10 or 15 percent reduction in viable sites?

Mr. HERBST. Let me answer that this way. Since we have received the industry comments and other comments, I have assigned three staff members, two of those with over 30 years of experience, industry and regulatory experience, to work on those and try to understand those comments and see if there are other ways to accomplish the same thing through those industry comments.

They have worked numerous meetings through this. I am getting that feedback. I am speaking directly with Director Salerno weekly on this. I think if we can accomplish the same objective by another means which industry has brought up, I think there will be that flexibility.

Mr. FLEMING. How receptive are you to real-time rules and regulations—that is to say, constant input and adjustment to be both safe, protective of the environment, and safe for humans, especially people on the rigs; and then at the same time accommodating the viability of those sites that need to be drilled in order to maximize and exploit natural resources?

Mr. HERBST. If I get your question right, an important part of our regulations, which this new rule does not impact at all, is alternative compliance. So again, if industry can come up with a better mouse trap, a better way of reaching that same objective, that regulation is there now and will continue.

Mr. FLEMING. OK.

That is all I have, Mr. Chairman. I yield back.

The CHAIRMAN. Mr. Graves.

Mr. GRAVES. Thank you, Mr. Chairman.

Mr. Herbst, I want to highlight the chart that was referenced, the one on the right side there. Having spent several months every single day out on the Gulf of Mexico during some of the period covered here, would you agree that there was more vigilance in the Gulf of Mexico during the 2010–2014 period, where you see the spike, than any other period in our Nation's history?

Mr. HERBST. Are you talking about vigilance from——

Mr. GRAVES. In terms of the number of people that were simply out on the Gulf of Mexico in boats looking for oil.

Mr. HERBST. Right. I am not sure if I get the question. Those reports are mandatory by regulation that they must report loss of well control events.

Mr. GRAVES. My point is this: you had the moratorium, which froze some aspects of energy production; correct?

Mr. HERBST. Yes.

Mr. GRAVES. OK, and the permatorium as well. That spike, I am going to guess, also corresponds with when the spigot was turned back on, the moratorium/permatorium was largely lifted. In addition, you had more vigilance out there in the Gulf of Mexico, in that I have never in my life seen so many boats and people out there. I understand there are mandatory reporting requirements, but if people aren't out there to see it, are they going to know that the things have actually spilled? So, I think it is an important distinction to make there.

Number two, I also want to point out, and following up on Congressman Rice's comments, you can look—I believe it is 1973. There were 2,200 separate spills in the United States related to waters, coastal and river waters in the United States—2,200. The

cumulative volume of oil that was spilled in those 2,200 spills was like one-tenth of the oil that was spilled in the Deepwater Horizon. This thing was absolutely one-of-a-kind, the only type scenario in its universe. I would remind you of what I said about the Judge's comments—gross negligence, willful misconduct, and all sorts of other one-of-a-kind type scenarios.

Dr. Mason, let me ask you a question. If this Well Control Rule, BOP rule, as anticipated, does cause a reduction, a continued reduction in the Gulf of Mexico's production relative to the remaining public lands in the United States, is that going to cause a decrease in demand or utilization of oil and gas in the United States?

Dr. MASON. No, absolutely not.

Mr. GRAVES. So, we are going to end up supplying that, in some cases supplementing it with additional foreign oil. Would that be——

Dr. MASON. That is correct.

Mr. GRAVES. One of the producers that is here, could you tell me, do you think that the United States has a more robust, a safer regulatory regime here than, for example, Venezuela, Nigeria, other countries? Or do you think those countries, that are some of the major suppliers to the United States, have a better or safer regulatory regime?

Mr. LEIMKUHLER. Relative to the countries you mentioned, I think we absolutely have a better regulatory regime.

Mr. GRAVES. OK, thank you.

Mr. Henderson, are you a proponent of the global environment, or just the environment in Louisiana or the United States?

Mr. HENDERSON. All three.

Mr. GRAVES. All of them. OK, thank you.

Mr. Herbst, let me go back and ask you a question. BSEE took, as I recall, 3 to 4 years to write this rule, and they initially proposed a 2-month comment period, and then a 3-month. I will say it again. The complexity of this—and I sat through briefing after briefing, I sat through the BP trial, trying to get my head around all this stuff—incredibly, incredibly complex activities here, and obviously getting it right is critical.

In some of the meetings I have had with some of the operators, it has been said to me that they are concerned that some of the proposed rule implications could cause less safe—less safe—operating conditions than we currently have today. Do you think that, considering the fact that it took Interior 3 to 4 years to actually write this rule—that it is appropriate to have a rule that has such profound economic consequences, such profound potential impacts on our environment here in Louisiana, as Mr. Smith noted, the most productive commercial fisheries in the continental United States, one of the most productive ecosystems on the continent—Do you think it is appropriate to only give industry 3 months to comment on something that it took the Department 3 to 4 years to write?

Mr. HERBST. That is personally outside of my call, but it is a very complex rule. It took a lot of input from a lot of different people. As mentioned before, standards were a big part of incorporating into this rule. Industry shouldn't be surprised by that part of the

rule. The other pieces, that is why we are continuing to work with those commenters, to get the best——

Mr. GRAVES. I believe Interior asked the National Academy to look at the real-time monitoring to provide a report back to Interior, to BSEE, on that aspect of the connectivity, the real-time monitoring. Has that report from the National Academy been received by Interior?

Mr. HERBST. I am not aware. I would have to get back to you on that question.

Mr. GRAVES. I don't believe that it has, and I am just wondering if you could follow up for the record, if you can please explain to the committee why you would ask for a report, not get it back, and yet go ahead and finalize or issue your proposed rule without being informed by the National Academy's feedback on that issue, which could cause cyber threats and other safety issues in the Gulf.

Mr. HERBST. I will get back to you on that.

Mr. GRAVES. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Mr. Westerman.

Mr. WESTERMAN. Thank you, Mr. Chairman.

As we have gone through this discussion and the things I have read about in the past, the term "drilling margin" comes up. It seems to be one of the key issues here, and obviously the safe drilling margin has to do with pressures in the drilling rig and in the pipe. But there is also another kind of margin that is an economic margin, that I think Dr. Mason has talked about, and it seems like this drilling margin may create such a small economic margin that it is going to hurt the industry in such a way that even the research at LSU can be affected into coming up with new renewable kinds of energy, which I am a big proponent of as long as they are economical.

So, Dr. Mason, in your research, have you looked at the relative economics of fossil fuel energy versus renewable energy in our current state?

Dr. MASON. That is something of tremendous interest to researchers like myself. We are trying to work that out right now. One thing that I do see from this type of proposed regulation, very large regulation coming through in big chunks, as Mr. Fleming referred to earlier, is that it creates an uncertainty on the part of companies bidding for lease rights in the Gulf, an uncertainty that the economics of what they are bidding on may change significantly after the fact. Those bidders will rationally bid down prices, potentially below reservation prices at which the Treasury and the Department of the Interior would be willing to grant such leases.

In the meantime, we have Mexico becoming active in the same Gulf and looking for prices to exploit their own reserves, and it is fairly easy for companies to just move right across the line within that Gulf, within the same ecosystem to, as others noted, a less safe drilling environment. So, I think we are right on that margin.

Mr. WESTERMAN. The last two Western Gulf and Central Gulf lease sales had the lowest number of bids in 20 years. What are the causes for such low industry interest in purchasing leases?

Dr. MASON. I think we are seeing the economics of the Gulf go south due to over-regulation and other influences, low oil prices, a confluence of factors right now; so this is probably a bad time to move.

Mr. WESTERMAN. Mr. Leimkuhler, what do you believe are some reasons for the drop-off in interest?

Mr. LEIMKUHLER. I think that basic economics is part of the driver in that respect. That is the primary driver, the overall economics and the projection forward of those not improving for some period of time.

Mr. WESTERMAN. Do you think we will see similar results in the recently announced lease sale for next spring?

Mr. LEIMKUHLER. I haven't taken a look at what has actually been proposed. I am unfamiliar with that, so I can't comment on it.

Mr. WESTERMAN. OK.

Ms. Davis, your company is not conducting any offshore drilling operations and would not fall under any of these regulatory provisions, yet you are adamant about the negative consequences this rule will have and how it will impact your business. I know in Arkansas it can even impact business. It can impact the economy across the whole country.

Were you invited to meet with BSEE this year and share any of your views?

Ms. DAVIS. No, I have not been.

Mr. WESTERMAN. To your knowledge, did BSEE conduct any listening sessions in the Gulf region to hear about possible unintended consequences of the rule?

Ms. DAVIS. Not to my knowledge.

Mr. WESTERMAN. Mr. Herbst, can you address that?

Mr. HERBST. If you are talking about the invites for this week, those were for folks that commented on the rule. The rule as proposed is open to all for commenting. But if they commented on the rule, they were invited back, from what I understand, to clarify those points in their comments.

Mr. WESTERMAN. Mr. Chairman, I yield back.

The CHAIRMAN. Thank you.

Mr. Smith.

Mr. SMITH. Thank you, Mr. Chairman.

Mr. Herbst, as I understand it, the rule requires the establishment of the BSEE-Approved Verification Organization, or BAVO. Has that been defined?

Mr. HERBST. It has not been finalized at this point, but the concept of having a verification organization is in the rule.

Mr. SMITH. When will it be defined?

Mr. HERBST. I am not certain on that. I will have to get back to you.

Mr. SMITH. OK. How would industry or the public comment on something that hasn't even been defined in a proposed rule?

Mr. HERBST. Again, they can comment on how it is implemented. They can comment on the idea of having a verification organization, not having one, who may be the best to do that type of work, and those comments then would be taken into account.

Mr. SMITH. So, they can public comment based on what possibly might be in a rule, but not even suggested that is in a rule, but a possibility?

Mr. HERBST. Again, the requirement of a verification organization to verify the BOPs is in the proposed rule, and again they could comment on how that is implemented.

Mr. SMITH. Could this verification organization be industry leaders?

Mr. HERBST. I believe, as it is written or intended, it is third party.

Mr. SMITH. So, it could be environmentalists?

Mr. HERBST. It would have to be someone with the expertise, that would have to have that expertise, especially around BOPs, to be that verifying organization.

Mr. SMITH. But there is nothing in the proposed rule that explains possibly who this third party is?

Mr. HERBST. No. We have similar rules in place now for third-party verification, and those areas are clearly defined. This is still open at this point.

Mr. SMITH. How many other requirements established in the proposed rule may not be defined in various other provisions?

Mr. HERBST. I am not sure how I would be able to answer that. If we think we have defined it, but again as we meet with industry, if there are questions or concerns, or it needs clarification, that is what would be built into the final rule.

Mr. SMITH. All right.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Mr. Rice.

Mr. RICE. Just a couple more questions.

I am looking at the map here put out by LLOG of the Gulf, the coast of the Gulf, and this issue about Mexico piques my interest. How far offshore does our U.S. Government jurisdiction go in regulating this offshore oil, Mr. Herbst?

Mr. HERBST. It is out to the economic exclusive zone. It is 200 miles. With Mexico, the United States has a trans-boundary agreement, and we have worked through that. We have continued to work with the Mexican regulators, originally CNH, now SIA, as far as how operations along that border will proceed.

Mr. RICE. All right. And that 200 miles would apply in the Atlantic as well?

Mr. HERBST. Yes, it would.

Mr. RICE. OK. So, a foreign country could come and drill 201 miles off our shore?

Mr. HERBST. I am not the expert on that, but I would believe so.

Mr. RICE. OK. Mr. Herbst, I am going to pick on you for a little while. Is there more risk in deepwater drilling than there is in shallow water drilling?

Mr. HERBST. The risks can be there for both depending on how the operations are conducted.

Mr. RICE. Mr. Leimkuhler, would you say there was more or less risk in deepwater or the same?

Mr. LEIMKUHLER. I would say the risk is very project dependent. The safest well I've ever drilled was in 9,000 feet of water, the

most risky was in 32,000 feet of water. It all depends upon the subsurface rocks you are drilling through in that environment, and that is not water——

Mr. RICE. These pressures that oil comes out, the pressure the oil is under, is that necessarily related to the depth of the water, or is it somewhat related to the depth of the water?

Mr. LEIMKUHLER. It is related to the depth of the well and the regional geology in which it sits.

Mr. RICE. OK.

Ms. Davis, do you think deepwater drilling is less or more risky than shallow water drilling, or the same?

Ms. DAVIS. I don't think there is any more risk in deepwater.

Mr. RICE. All right.

What is deep, Mr. Herbst? How do you define what deepwater is?

Mr. HERBST. It has been defined differently over the years. Currently it is 500 feet of water depth is deepwater, the way we define it.

Mr. RICE. OK.

I yield back my time.

The CHAIRMAN. Thank you.

I have a couple of quick questions for a few people.

Mr. Herbst, let me start with you. You said to one of the questions that if companies commented on the rule, they were invited back. So, all companies who made comments would be ensured of meeting with BSEE?

Mr. HERBST. From what I understand, if there was interest, BSEE asked if they needed to clarify their comments. Again, you had to have commented before, and this was an opportunity to clarify those comments.

The CHAIRMAN. So, all companies who commented are going to have a meeting, or at least be invited to a meeting?

Mr. HERBST. I don't know for sure. I was not the one who sent out the invites.

The CHAIRMAN. All right.

Look, I had a great Aunt Bessie. You guys need to change your acronym. I liked her.

[Laughter.]

The CHAIRMAN. Dr. Mason, universities like LSU obviously adjust their curriculum. I was interested in your testimony that asserted that the Federal regulatory environment is essentially migrating the job opportunities to compliance, rather than exploration and production. Is that accurate, and can you expand on that for just a couple of minutes, or less?

Dr. MASON. Sure. That is a well-known dynamic in regulated industries. We are seeing that in financial services now in response to Dodd-Frank, where we are not seeing banks lend to consumers or businesses. We are seeing them beef up compliance in all different areas to meet these thousands of pages of new, unknown regulations that are still not even written. So, we are bound to do the same thing here in oil and gas. It is pretty straightforward.

The CHAIRMAN. So, traditionally then, market forces usually drive what the job market becomes. It seems like in the Gulf, the biggest market force now is the Federal Government.

Dr. MASON. Yes. The Federal Government and state governments can become part of the market force, creating job opportunities in what I would view as a somewhat perverse fashion at times, if it is not driving safety on the margin, and we have seen this before.

The CHAIRMAN. All right. That could or could not be good. I would appreciate Mr. Herbst saying that you are actually going to be soliciting industry's comments again. That is essential. That is very important.

Maybe to Ms. Davis and Mr. Leimkuhler again. OPEC is purposely depressing oil prices with their policies, and it seems to me it is having a real impact on both small and large businesses, especially here in the Gulf. Ms. Davis, can you just tell me personally how this has impacted the current hiring trends and the business investments in the Gulf?

Ms. DAVIS. It makes it very difficult to plan anything. To the point we talked of earlier, with all these regulations, things that are changing the environment, and all the things that are happening with OPEC, a company like RIG-CHEM can't sustain for much longer. We will go away, and small business will be hurt.

To your point about OPEC, we don't know, we have no way to predict what is going to happen for the future. All I can do is tell my employees every day that we have to keep looking for new opportunities; but with more regulation, that will not happen.

The CHAIRMAN. I appreciate that. This area of discussion is so broad, we didn't have a whole lot of time to go into a lot of things. We didn't even go into the exporting ban. But it seems very obvious that OPEC has a unique strategy that they are using to see if they can drive our country into a particular pattern. What scares me is, I think they are successful right now, which is worrisome to me, especially for the potential this country has as far as energy production and the significance of affordable energy in the ability of the entire economy to go forward, as well as how it helps people in their daily lives. If we do not have affordable energy, we don't have a lifestyle that is worth living, and that becomes extremely significant.

Mr. Lukeheimer—Leimkuhler. I am sorry; I am dyslexic. Mr. Leimkuhler—I am not dyslexic, by the way. I just say that.

[Laughter.]

The CHAIRMAN. And I forgot the question. No, the same question.

Mr. LEIMKUHLER. It creates that condition quite often.

The CHAIRMAN. I am running down your time. Just OPEC's impact on the business climate here in the Gulf.

Mr. LEIMKUHLER. Right now, with the decline in oil prices, our net margins have been basically reduced by somewhere on the order of 70 percent. Therefore, right now, we are not really looking to expand. I currently manage the drilling contracts at LLOG. We are going to live up to the contracts we signed. But are we going out and looking to sign up more rigs? Not at this time. We need to see an improvement in the economic conditions to expand our rig count back to where it was about 2 years ago.

The CHAIRMAN. Thank you. That is not a positive sign, but I appreciate that answer very much.

The committee does have a couple of other assignments here. If anyone wants a 2-minute final question? If not——

Mr. GRAVES. Can I just do——

The CHAIRMAN. You can do a 2-minute wrap-up, and then let me do a wrap-up.

Mr. GRAVES. Thank you. Mr. Chairman, thank you very much.

I want to thank all of you for being here. I think that all your perspectives are certainly helpful; and I want to be clear, I have spoken to every Member here. I think that everyone wants to get this right, that we want to improve safety. Looking at BP alone, I believe they are going to end up spending in excess of $50 billion.

There is a huge incentive for companies to get this right, a financial incentive, and I think that is important to keep in mind.

Looking at it a little bit more parochially—this is part of our economy, it is part of our culture. Senator Vitter talked about that earlier. It is a big part of what we do here, and I am concerned about the global environment. I think it is important to keep in mind that you don't just change rules here, and all of a sudden everywhere else the same thing happens. We are going to increase our dependence on foreign energy where it is produced less safely. So, we lose the jobs, you get an adverse impact to the environment, and I think that is wrong.

We have to get this right. Showing the disparity that Congressman Smith talked about in the cost estimate, $800 million to $32 billion, there is a huge disparity there in terms of what industry is estimating and what the Federal Government is estimating. I think I even read something saying the Federal Government thought this could save money, which I don't get. We have to reconcile these.

Mr. Herbst, I want to ask you if BSEE would commit to doing public meetings and not just to meet with companies that have submitted comments, to meet with everyone who wants to meet on this. We have to get this right, and I think that is very, very important.

Last, I just want to say that, ultimately, this is critical for the U.S. energy security, as the Chairman noted, so we are not subject to the whims of OPEC to the degree we are today; and I think it is critical for our environmental security. Thank you.

The CHAIRMAN. Thank you all. I want to thank everyone who has been involved in this particular hearing. The city and the state has been very kind and gracious to us in holding a hearing down here. I am happy we were able to be here.

I appreciate the fact that the two Senators from Louisiana were able to be here as part of this hearing.

The current Members who are here, thank you for your attendance and thank you for your thoughtful questions.

I thank the witnesses who came here for your time and effort.

I noticed I was able to meet former Congressman Johns, appreciate you being here as well. I think after this hearing you are grateful that you are no longer here, right?

[Laughter.]

The CHAIRMAN. You made the right choice there.

With all of that, I thank the witnesses for your testimony, both written and oral testimony.

Members of the committee may have additional questions for you. We are going to ask that you would respond to those in

writing. Under Committee Rule 4(h), the hearing record is open for 10 business days for those responses to get to you and be returned to us.

If there is no further business, without any objection, I just pounded the gavel and we are now in adjournment.

[Whereupon, at 10:55 a.m., the committee was adjourned.]

[ADDITIONAL MATERIALS SUBMITTED FOR THE RECORD]

PREPARED STATEMENT OF THE INTERNATIONAL ASSOCIATION OF DRILLING CONTRACTORS

Thank you for the opportunity to submit written comments for the record. The International Association of Drilling Contractors (IADC) is a trade association representing the worldwide interests of the onshore and offshore drilling industry since 1940. With over 1,800 members, IADC membership reaches nearly every state in the United States. Our members operate the vast majority of onshore rigs in the United States and offshore, our drilling contractor members operate all the Mobile Offshore Drilling Units (MODUs) operated in areas subject to the jurisdiction of the United States. These comments are offered without prejudice to communications that may be offered directly by IADC member companies.

As a trade association, IADC's purpose is to advance drilling and completion technology, improve industry health, safety, environmental and training practices; and champion sensible regulation and legislation which facilitate safe and efficient drilling. Through 17 Committees and 15 global Chapters, IADC creates the space for members to connect, collaborate and create solutions aimed at addressing the industry's most critical issues.

Current Industry Landscape and Industry Outlook for the Drilling Contractor

At the leading edge of the oil and gas industry, only the drilling contractors build, own, and operate the rigs without which no well could be drilled, completed, produced or worked-over. The drilling industry is in the midst of a major recapitalization as currently 230 new offshore units are being built for future delivery. The costs of these units range from about $200 million for a shallow-water jack-up unit to nearly $1 billion for a deepwater drillship. Similar recapitalization has taken place with onshore drilling contractors in order to provide equipment to drill wells to be hydraulically fractured: these units cost from $20–$40 million. Both onshore and offshore, the latest design drilling units are more effective, safer and more environmentally efficient than earlier units.

The demand for secure and affordable energy is clearly the driver for drilling activity. In August 2015,[1] amid high uncertainty in the global oil market, the U.S. Energy Information Agency (EIA) lowered crude oil price forecasts in the Short-Term Energy Outlook (STEO), anticipating benchmark West Texas Intermediate crude oil prices to average $49 per barrel (b) in 2015 and $54/b in 2016, $6/b and $8/b respectively lower than forecast in the previous month's STEO. Such lackluster price forecasts reflect in a similarly lackluster demand for oil and gas, which in turn depresses current drilling activity and near-term outlook.

Changing market conditions, both in the United States and internationally, have dramatically impacted the oil industry as a whole, creating an environment of caution and uncertainty for the drilling contractor. Baker Hughes has issued the rotary rig counts[2] as a service to the petroleum industry since 1944, when Hughes Tool Company began weekly counts of active U.S. and Canadian drilling activity. On September 4, 2015, Baker Hughes' reported 33 offshore units in U.S. waters compared to 65 in October 2014; a market reduction of almost exactly 50 percent within a 12-month period.

The decline in offshore rig count continues in spite of some stability in the oil price in the 2nd/3rd quarters 2015—albeit at a low level. The majority of drilling companies, both onshore and offshore, have been forced to decommission rigs and shift priorities from future investments to address internal financial constraints. One U.S.-headquartered offshore drilling contractor that has focused on the shallow water sector, where well productivity is lower than the deeper Gulf, filed for

[1] http://www.eia.gov/todayinenergy/detail.cfm?id=22572.
[2] http://phx.corporate-ir.net/phoenix.zhtml?c=79687&p=irol-reportsother.

bankruptcy this summer and the company's stock has been delisted from the NYSE and is now trading on the OTC market.

The reduced rig count is reflected in drilling-related employment. According to an August 19, 2015 Rig News Article, 50,000 energy jobs have been lost during the months of June, July, and August, on top of 100,000 employees laid off since oil prices started to decrease in fall of 2014.

The U.S. Gulf is one of the highest cost basins in the offshore sector in which U.S. companies operate. Uncertainty in oil and natural gas markets, which will likely continue over the next several years, is clearly a major factor in declining rig count in U.S. waters. However, in addition to this market uncertainty, the U.S. oil and gas industry is contending with layers of new regulatory proposals that further increase uncertainties and, if implemented, will impose further costs on the U.S. industry, rendering it less competitive in the global marketplace.

Harmful Regulations Impede Economic Growth and Threaten Survivability

IADC will never object to regulations that are necessary or enhance safety and operational integrity. And, as in any business, drilling contractors require confidence in and consistency of new regulations, with sufficient lead time to fully implement them.

Throughout IADC, our members share the belief that for the prevention of blowouts, explosions and fires, well control is the most critical area. IADC and member experts from across all areas of the industry are working together, and ahead of governments everywhere, on the improvement of competency programs and technical solutions in well control performance.

A powerful example of this is the recent creation of the Well Control Institute (WCI). The WCI is a unique industry oversight body, comprising the most senior representatives from operators, drilling contractors and equipment manufacturers in the industry. The WCI is committed to developing solutions to issues such as blowout preventer equipment reliability and rig crew competency.

Within the context of well control, IADC recently launched WellSharp™, a root and branch overhaul initiated by industry to redefine how well control training and assessment is delivered with the goal of keeping wells in a safe state throughout their life span, and avoiding blowouts. IADC accredits training institutions, whether commercial or company in-house, to conduct training that meets or exceeds the curriculum requirements set forth in WellSharp™. The new standard requires trainees to be more engaged in the learning process and to undergo individual skills assessments appropriate to their specific well control roles and responsibilities. The knowledge-assessment database identifies specific knowledge gaps and allows instructors to review and close these gaps with each trainee before the completion of training. The system provides metrics regarding the alignment between the course taken and the trainee's job position and affords analysis of instructor performance. It is a truly unique, multifaceted program developed to accomplish a step-change in well control competency, enhancing crew capabilities and eliminating errors.

A current joint industry effort is a blowout preventer (BOP) reliability and performance improvement program. IADC and the International Association of Oil and Gas Producers (IOGP) and their members are collaborating to develop significant and continuous enhancements to BOP operability and reliability. This is an unprecedented collaboration between oil and gas producers, equipment manufacturers and drilling contractors that began in the U.S. Gulf. It will give far greater assurance that BOP's across the world will function on demand whilst also driving out cost related to equipment being out of service.

U.S.-based offshore drilling contractors first initiated the data sharing project that underpins the BOP reliability program, supported by the recommendations for reporting of equipment malfunctions and failure in API Standard 53, Blowout Prevention Equipment Systems for Drilling Wells, Fourth Edition (API 53). The BOP reliability program establishes a permanent performance improvement tool that will track and capture performance of BOP equipment.

The Macondo incident provoked the assemblage of the largest ever collaboration of well control subject matter experts and principals to create solutions to, and apply continuous improvement in, well control performance. A major focus of these efforts has been the API standards program and other international standardization platforms. IADC has connected its members to work collaboratively as subject matter experts on a vast number of standards committees.

Industry has taken its own lead to fulfill the responsibility to secure safer, cleaner and more efficient drilling operations and IADC also strives to support and work with government agencies to develop regulations that are targeted, relevant and proportionate. Regrettably, recent U.S. offshore regulatory initiatives could actually lead to a less safe drilling environment.

IADC believes the Bureau of Safety and Environmental Enforcement's (BSEE) new proposed regulation on well control and blowout prevention is precisely the type of overly prescriptive regulation that restrains best industry safety practice and its subsequent benefits: innovation, jobs and economic growth.

IADC readily acknowledges and commends the efforts of BSEE staff to produce such a major draft rule. We also appreciate the tremendous external pressures applied to the Bureau by opponents to the U.S. oil and gas industry, many of them uninformed and inexpert in the matters of well control and offshore operational integrity. However, the (undoubtedly) unintended consequences of BSEE's inflexibly prescriptive Well Control Rule fails to account for and to encourage substantial industry improvements post-Macondo. In some cases, the requirements of the rule are simply unfeasible, requiring industry to operate sub-optimally. In addition, the measures in the rule differ widely from international standards and will negatively impact the market for U.S. MODUs.

IADC's formal response to the BSEE draft BOP rule, minus its detailed technical annexes, is attached to this statement for the committee's convenience. The committee should note that IADC, and other key organizations and associations, have urged BSEE to continue to work with industry to jointly analyze "respective sections of the proposed rule in order to reach mutual understanding of the proposal, to correct fundamental flaws in the proposed rule, and allow constructive development of rules that are ultimately both workable and effective. We further request that the comment period be reopened during the workshops and that the presentation and discussion be part of the official record."[3] We sincerely hope the Bureau will respond to the unanimous call from industry experts and leaders in this respect.

Positive Policies to Spur Safer Energy Production:

As this committee works to develop new policies and legislation, IADC recommends, among other things, the below changes to existing law to spur energy production:

1. **Narrowly targeted amendments to Outer Continental Shelf Lands Act (OCSLA)**—We urge, on behalf of both industry and the agencies involved, an amendment to OCSLA to allow BSEE & USCG more flexibility to undertake risk-based (rather than mandated annual) inspections in line with other leading jurisdictions in Europe, Canada and Australia. We encourage the proposed reforms by Director Salerno of BSEE to secure for the Bureau the goal of targeting risk and allocating scarce specialist resources where they are most needed.
2. **Increased offshore access**—Based on the latest Federal estimate, the U.S. OCS contains approximately 90 billion barrels of oil and over 404 trillion cubic feet of natural gas. However, over 85 percent of the OCS remains off limits for leasing. The only areas open to OCS production lie in the west of the Gulf of Mexico, a few legacy leases off California, and areas in Alaska. New areas in the Atlantic off Virginia, the Carolinas and Georgia should be included in the 5-year plan for 2017–2022. In order to continue the development of our Nation's offshore resources, Congress should ensure new areas are included for continued development on the OCS.

   In particular, it is important that all 26 OCS regions are made available for full exploration, utilizing the latest seismic technologies to delineate oil and gas potential. The Atlantic OCS contains an estimated 4.72 billion barrels of oil and 37.5 trillion cubic feet of natural gas, while the Eastern Gulf of Mexico holds an estimated 5.07 billion barrels of oil and 16.08 trillion cubic feet of natural gas. Those amounts represent more than 20 times the 2012 Federal offshore oil production and over 94 times the 2012 Federal offshore natural gas production. It is strategically important for the United States to confirm the availability of these resources and their potential for economic development.

   In the Arctic, it is vital that the United States maintain and accelerate opportunities to develop offshore oil and gas in the resource-rich Beaufort and Chukchi Seas. The region holds an estimated 23.6 billion barrels of oil and 104 trillion cubic feet of natural gas. The United States must assert its

[3] Industry's joint comments submitted to the Department of Interior in response to BSEE's proposed rulemaking entitled, "Oil and Gas and Sulphur Operations in the Outer Continental Shelf—Blowout Preventer Systems and Well Control." Comments were submitted via electronic submission to: http://www.regulations.gov/.

economic interests in the Arctic at a level commensurate to the initiatives of its Arctic neighbors and competitors.

3. **Clarification of contractor liabilities/responsibilities under BSEE regulations**—IADC has raised concern many times regarding uncertainty in contractor liabilities and responsibilities under BSEE's regulations. These result from post-Macondo changes to agency policy reinterpreting assignment of regulatory responsibility for their entire suite of regulations, without the benefit of administrative rulemaking as provided for by the Administrative Procedure Act. IADC has addressed this situation in responding to rulemaking proposals issued after the policy change. Unfortunately, no rules have been made under APA and thus it is not possible to anticipate how the agency policy may have changed, particularly when anticipating the proposed BOP rule.
4. **Lifting the Crude Oil Export Ban**—IADC lends its support to other organizations representing the oil and gas industry for lifting export restrictions on crude oil as it would bolster price growth for domestically produced oil and facilitate job creation. IADC wishes to emphasize that the oil and gas industry, which includes drilling contractors, accounts for 5.3 percent of total U.S. employment. The number of jobs supported by the upstream segment alone in 2010—2.2 million—is larger than the populations of 15 states.

   Every new oil and gas exploration and production job supports three new jobs in the supply chain and another six jobs in the broader economy. The supply chain extends beyond the oil producing regions into every state in the union. A new IHS study finds that lifting the ban would introduce an annual average 124,000 jobs into the supply chain and that 394,000 jobs annually would be created economy-wide between 2016–2030.[4]

   The crude oil supply chain would add $26 billion to the GDP per year 2016–2013. Labor income would rise by more than $21 billion per year, on average, which translates to an additional $158 per household. Cumulative government revenues from corporate and personal taxes attribute to supply chain industries would increase by $429 billion.

Closing

Overall, the next 3 years will be challenging for the drilling contractor due to uncertainty over oil prices and Federal regulations. History shows that, with the ebb and flow of the oil market, industry should expect continued decline in U.S. crude oil production before it resumes growth again in late 2016 as EIA estimates.[5] It remains to be seen how industry fares in the upswing as a result of the impacts of potentially deleterious regulation such as those that are currently proposed. The U.S. industry has, by its innovation and advanced technology, secured both an energy price miracle for Americans, and the world's top spot in oil production. The question U.S. policymakers must decide is whether their ambition is for the United States to responsibly develop these resources and to continue to set an outstanding world example, or bequeath that to another jurisdiction.

Submitted by:
Stephen Colville

*****

The following document was submitted as an attachment to Mr. Colville's testimony. This document is part of the hearing record and is being retained in the Committee's official files:

—IADC letter to BSEE

[4] http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=4d087117-d0ac-4446-9610-73f19c6592e8.

[5] http://www.eia.gov/forecasts/steo/report/.