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THE ECONOMIC AND FISCAL CONSEQUENCES OF THE DROP IN SHALLOW-WATER DRILLING PERMITS: IMPACTS ON THE GULF COAST AND THE NATION

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Introduction and background

More than four months ago, in response to the April 20 Macondo blowout and oil spill in the Gulf of Mexico, Secretary of the Interior Ken Salazar imposed a moratorium on all offshore oil and gas drilling activity in the United States. The rationale behind the ban was, according to the Secretary, "to ensure that drilling activity undertaken on the nation's Outer Continental Shelf is conducted in a manner that is safe for workers, coastal communities and the environment."[1]

In late May, the Obama administration lifted the ban for shallow-water drilling activities, defined at the time as those occurring on rigs in less than 500 feet of water. Yet despite the official removal of the limitation on shallow-water operations, the rate at which the Department of the Interior's Bureau of Ocean Energy Management (BOEM) now issues permits authorizing drilling of new shallow-water wells has slowed markedly in comparison to pre-April 20th levels. As a result, the already substantial ongoing social and economic impacts of the deepwater drilling ban have been exacerbated by the slowdown in shallow-water drilling activity in the Gulf resulting from the industry's ongoing difficulty in obtaining permits to drill. What's more, while the media and most third-party analyses have focused on the economic consequences for the Gulf Coast region related to the deepwater drilling ban, comparatively sparse attention has been paid to the sizeable costs of the de facto ban on shallow water drilling.

This report begins by reviewing available estimates of the economic, fiscal and social impacts of the damage resulting from the Gulf oil spill as well as the administration's moratorium on deepwater drilling. In the second section, we evaluate the current and longer-term impact of the de facto moratorium on shallow water drilling. Finally, the report argues that in the wake of a significant incident like the *Deepwater Horizon*, we must continue to pursue sensible, balanced policies to promote the development of domestic energy resources in tandem

[1] Mufson, Steve, *Administration issues revised moratorium on offshore drilling*, Washington Post, 12 July 2010.

with the promulgation of regulations designed to mitigate the risks of future energy-related incidents.

Oil-spill damage and deep water drilling ban: projected economic impact

Since the blowout of the Macondo well on April 20, a number of analyses have been conducted that attempt to calibrate the impact on the economy of the Gulf coast of the spill and the resulting deepwater drilling moratorium. Taken together, these two areas of inquiry help to put into perspective the comparatively under-reported impact of the Department of the Interior's marked slowdown in the issuance of shallow-water drilling permits.

In analyzing the impact of the environmental effects of the oil spill itself, one area of inquiry looks to the consequences of lost revenue for the Gulf's commercial fishing industry. The Gulf of Mexico accounts for approximately one-fifth of total U.S. commercial seafood production and nearly three-quarters of the country's shrimp industry, with Louisiana alone producing fifty percent of the U.S. shrimp harvest as well as a significant number of crabs and oysters. Total revenue from commercial fisheries in the Gulf is estimated at $800 million annually. Much of this year's lost revenue, however, has been mitigated by offset payments provided by BP and the U.S. government.

A study prepared in mid-summer 2010 by Oxford Economics for the United States Tourism Association furnished estimates of lost tourism revenue to Gulf states due to the effects of the oil spill on the marine environment. The study includes a "low-impact" scenario that now appears most applicable in view of the relatively rapid clean-up process of the most visible aspects of the oil spill. Under this scenario, tourism revenue is estimated to fall approximately $4 billion in 2010, then $1 billion in 2011. Notably, these estimates do not include payments

that may be received by tourism-related businesses in the form of business-interruption insurance or other means of compensation for lost business.

Other work focuses squarely on the economic impact of the deep-water moratorium. One such report, conducted by Moody's Analytics, concludes that economic losses from the deepwater drilling ban rival those of the oil spill damage itself. The report estimates that the Gulf Coast region will lose 17,000 jobs and $1.2 billion of economic activity by the end of 2010, assuming (correctly, it appears) that the Macondo well is permanently sealed in September.

Another report, commissioned by the American Energy Alliance and conducted by Professor Joseph Mason at Louisiana State University, concludes that the administration's six-month moratorium could result in the loss of $2.1 billion in output, more than 8,000 jobs, $487 million in wages, and nearly $98 million in forfeited state tax revenues in the Gulf states alone. Factoring in the likely spillover effects of the deepwater moratorium on support industries in the region such as ship-building, construction, metal fabrication and a host of other related occupations, the cost to the broader economy could reach $2.7 billion in lost output, $219 million in foregone tax revenue, and more than 12,000 jobs. The Mason study also warns that a permanent moratorium on offshore drilling in the Gulf of Mexico could cost more than 400,000 jobs and $95 billion in output nationwide over a period of years as the industry shifts to other parts of the world.

The U.S. Department of the Interior, which is charged with direct oversight of offshore drilling operations, has also attempted to estimate the effects of the deepwater moratorium on the Gulf Coast region. In a study submitted to a federal court in New Orleans on August 20th, the Interior Department projected a loss of as many as 23,000 jobs if the moratorium were to remain in effect through the end of November. The Interior study further projects a loss of $10 billion in

total economic activity, a $522 million decline in federal royalty revenue, and a reduction in Gulf of Mexico oil and gas production of four percent.

Other analyses focus on the impact of the deep-water drilling ban on domestic oil production. The Energy Information Agency's *July Outlook* predicts the moratorium will reduce U.S. domestic oil production by roughly 30 million barrels over the next 12 months.

More serious long-term consequences may attend the moratorium on deep-water drilling. At the time of the blowout, 33 deepwater drilling rigs were operating in the U.S. Gulf of Mexico. Twenty-four have since been idled by the moratorium. These "floating factories" cost between $500 million and $1 billion each to construct. Prior to the moratorium, deepwater rigs were leased out for $250,000 to $500,000 a day. Absent that revenue stream, several rigs have departed the Gulf, with others likely to follow. The result of the rig departures is a potential decline in Gulf oil production – which accounts for about one-third of total U.S. oil production – of a half-million barrels a day over the next five years, with associated falls in royalty revenue directed to the United States treasury, as well as a corresponding heightened reliance on foreign energy sources needed to satisfy the nation's energy needs.

The effects of the slowdown in shallow-water drilling permit approvals

Ample study has been given to the economic effects of the oil spill's environmental damage and the impact of the deep-water moratorium. The Interior Department's drastic slowdown in approving permits for shallow-water drilling operations also has very serious economic implications for the region that rival, or exceed, those of the spill and moratorium. Thus far, this impact has attracted little attention from Congress, the media, or third-party analysts despite the fact that the nearly 40,000 jobs related to the Gulf of Mexico's shallow-water

drilling industry have been placed in jeopardy by the Department of the Interior's apparent decision to slow-walk the shallow-water permit approval process.

An illumination of the differences between shallow- and deep-water drilling operations is necessary to understand the uniquely difficult situation in which the shallow-water industry now finds itself. Compared to the relatively newer and technologically complex endeavor of deep-water drilling, in which oil and gas are extracted at depths reaching 10,000 feet below the surface of the ocean, shallow-water drilling operations have a 60-year track record of considerable reliability and safety. Shallow-water drillers work in less than 500 feet of water, mainly extracting gas. Projects center on well-charted fields of known pressure and geography, using simple and straightforward technology. The well head and blow out preventer in shallow water drilling are located on the rig itself, thereby providing ready access for inspection, maintenance and repair. During the past 15 years, more than 11,000 shallow-water wells have been drilled in the Gulf of Mexico, with a total of 15 barrels of oil spilled during that period of time.

Despite the industry's demonstrated safety record and straightforward approach to sub-surface energy resource extraction, as of August 31 BOEM had issued only five permits for new shallow-water wells in the nearly five months since the April 20th *Deepwater Horizon* accident. Prior to the spill, the Interior Department issued an average of 10 to 15 permits for new shallow-water wells per month.

While administration authorities have emphasized that the official moratorium applies solely to deep-water operations in the Gulf, the Interior Department's apparent hesitancy to approve drilling permits for new shallow-water wells has subjected the industry to a period of extreme economic duress, with related spillover effects on Gulf Coast households and businesses.

As a result of the permitting slowdown, by the end of August 2010, 14 jackup rigs used for shallow-water drilling in the Gulf sat idle, representing 30 percent of the total fleet. The impact on the industry is severe due to its unique business model. Unlike deep water rigs that are on contract for months or years at a time, shallow-water drilling rigs move from project to project on a six- week cycle, meaning that failure to approve new permits can quickly mothball the entire industry (see Table 1).

Table 1
Progression Of Growth In The Number of Stacked Jackup Rigs

	TOTAL	TOTAL % (46 rigs)
Jackups currently stacked as of August 30, 2010 due to the moratorium	**14**	**30**
Jackups to be idle by September 30, 2010, if no new permits (of any kind) are issued	**28**	**63**
Jackups to be idle by October 31, 2010, if no new permits (of any kind) are issued?	**37**	**80**

Source: Survey of active shallow water drilling contractors

A recent study prepared by The CapAnalysis Group, LLC has attempted to quantify the economic impacts of the de facto ban on shallow-water drilling. Over the course of one year, should 75 percent of the rigs become stacked as a result of BOEM inaction on issuing permits, the direct economic losses to the nation's businesses and workers would exceed $4.3 billion, with Louisiana taking the biggest hit and Mississippi second (see Tables 2 and 3).

Table 2
Annual Direct Economic Impact (2010 Prices)

	Shallow Water GOM Drilling Rigs:	
[A]	Total Dayrate for Contracted Shallow Water Drilling Rigs	$2,978,600
[B]	Jackup as Percentage of Total Drilling Well Cost	25%
[C]	Total Daily Drilling Well Cost	$11,914,400
[D]	Working Days per Year	365
[E]	**Annual Direct Economic Impact (2010 Prices)**	**$4,348,756,000**

Notes:

[A] Hercules estimate on May 10, 2010.

[B] Hercules estimate. At current prices, drilling rig cost represents roughly 33% of total well cost. Other costs are comprised of casing and tubing, service companies
(HAL, SLB, WFT), transportation rentals, etc.

[C] = [A] X [B].

[D] Assumes rigs drill year round.

[E] = [C] X [D].

Table 3
Direct Impact By Region

Region	2010 Dollars Direct Impact	Share
US	$4,348,756,000	100.0%
LA	$2,218,896,515	51.0%
MS	$1,251,204,582	28.8%
TX	$548,280,659	12.6%

Notes:
State shares based on residence distribution of Hercules' and Seahawk's GoM workforce.

Adding in the ripple effects of lower indirect and induced spending, which will affect all areas of the economy, the nation's income losses could exceed $12.5 billion. Nationwide, more than 50,000 jobs could disappear, with Louisiana and Mississippi, two of the nation's lowest income states, suffering the most. Substantial revenues from lease sales and royalties would be foregone as well.

Of particular concern to the region is the nature of the jobs most likely to be lost. Industry sector data demonstrate that U.S. natural gas and oil workers earned an individual average of approximately $66,000 in 2004, the last year for which data are available. By way of comparison, this average individual income is some $20,000 more than the combined household income for the average American family.

Small businesses are particularly vulnerable to the effects of the de facto shallow water moratorium, as well as the ban on deepwater operations in the Gulf. The vast majority of companies working in shallow water are small, independent operators, making the interruption of new shallow-water drilling especially harmful to both them and the small businesses along the Gulf Coast that support them. A July 2010 study by Dun & Bradstreet estimates that about 2,800 small Louisiana businesses, employing more than 35,000 workers, are directly involved in the oil and gas industry. The figures rise to more than 16,000 small companies and 153,000 employees when expanded across the Gulf Coast.

The Louisiana Economic Development agency has predicted that 10,000 jobs around the state will be lost by the end of the year and another 10,000 within 18 months unless both deep and shallow-water drilling resume quickly. Most of these job losses will be felt by small and family-owned businesses. At an August 17 Lafayette, Louisiana field hearing of the U.S. Senate Small Business and Entrepreneurship Committee, representatives of the local banking, real estate

and hospitality industries documented the extent to which their businesses had been harmed by the drilling bans. Many small businesses are scaling back expenses and laying off workers while others are cutting back because of uncertainty about the cost of proposed new regulations for offshore drilling once the drilling ban is lifted. Banks are leery about making loans to oil, gas and boat businesses for fear that more operations will move overseas. Housing prices and sales have dropped markedly over the past several months—even as they've stabilized nationally—while pending residential home sales are down 23 percent from a year ago.

Undermining affordable and reliable supply of natural gas will have economic impacts well beyond the Gulf Coast region. It is well established that nearly 70 million American homes and businesses are heated with natural gas, and that approximately 23 percent of America's electricity is generated with gas. Another 30 percent of America's natural gas supply is used by virtually everyone because natural gas is a key input or feedstock in the products made by U.S. industry.

Restrictions on natural gas supply will be reflected in price increases for food (due to fertilizer and pesticide costs, among others), clothing (due to fiber production inputs), transportation (due to fuel additives), health care, consumer products, and building materials. Because those living in poverty or on fixed incomes spend a greater portion of their monthly incomes on these essential goods and services, the economic impacts of the shallow-water permitting slow-down are among the most regressive of any energy policy.

Combined with the deepwater drilling moratorium, the de facto ban on shallow-water drilling poses a serious threat not only to the domestic oil and gas industry but to the entire nation. If the bans remain in place much longer, additional exploration and production will move overseas, destroying thousands of high wage American jobs while weakening the nation's

economic and national security as larger quantities of fossil fuels are imported. And as more rigs relocate to other countries, the U.S. risks losing its global technical leadership in offshore drilling, just as has occurred with nuclear energy.

Offshore drilling: a critical component of a sensible energy policy

The moratorium on deepwater drilling and the de facto moratorium on shallow-water drilling are having significant negative economic impacts, not only on businesses and communities along the Gulf Coast but, because of the multiplier effects, on the nation as a whole. Just recently, the Bipartisan Policy Center delivered the findings of its working group on the deepwater drilling moratorium to the National Commission on the BP *Deepwater Horizon*. The Center, which appears to have been asked to assess the use of the moratorium as a response to the Macondo blowout and oil spill, characterized the use of a deepwater moratorium as "something of a blunt response." The Center made several important findings and recommendations from the perspective of the shallow water industry. First, it notes the substantial differences between deep and shallow operations. Second, it observes that nearly all shallow water permits for new wells were still pending on the date of the report's release. Third, it recommends that the Interior Department identify the causes of the permitting delay and develop a "strategic approach" to assessing industry compliance with new requirements. Finally, it highlights the fact that the time frame for the safe resumption of drilling should not be excessive.

Should the deepwater moratorium remain in place and shallow-water permitting not resume in a timely fashion, over the course of a year the combined losses to the U.S. economy could exceed $15 billion in output and more than 60,000 jobs. At the same time, billions of

revenues for federal, state and local government will be forfeited. Given the fragile state of the nation's economy, these are losses we simply cannot afford.

In addition to the short-term economic losses, broader policy issues must be considered in assessing the long-term impacts of the drop in offshore oil and gas production. For example, President Obama cited the Gulf oil spill as a rationale for accelerating America's shift to "green" energy. But the reality is we cannot satisfy all of our future energy needs from conservation, efficiency and renewables. Indeed, the U.S. Energy Information Agency estimates that fossil fuels will still account for 79 percent of energy demand in 2030. Consequently, we should pursue policies designed to enhance, not impede, the domestic production of oil and gas—including offshore reserves.

For example, even when the deepwater moratorium is lifted, the experience of shallow water drillers demonstrates that drilling is not likely to resume quickly. The administration has imposed, and will continue to develop, requirements and standards that will entail more significant environmental review before new permits are approved. Indeed, Secretary Salazar recently stated that the BOEM would conduct a thorough environmental review of all future drilling in the Gulf of Mexico and elsewhere on the Outer Continental Shelf. The new policy will require much more extensive governmental oversight once the moratorium is lifted and will lengthen the review and approval process. Many industry officials worry that new safety, environmental, technical, and financial requirements will drive some companies out of business and discourage future domestic exploration.

Along with proposed new fees on oil and gas production, the regulatory and financial burdens could be especially onerous for shallow-water drillers. Comprised primarily of small and medium-sized independent operators, the 284 companies working in the Gulf of Mexico

accounted for 73 percent of total Gulf production in 2009 while supporting more than 200,000 jobs across the region and adding $38 billion to the nation's economic output. Excessive regulatory compliance burdens, coupled with an onerous permitting process, could put many of these companies out of business.

Conclusion

It is imperative that the BOEM quickly resume issuing permits for shallow-water drilling at a regular pace. What's more, given their outstanding performance over the past two decades, these companies should not be required to meet the same new safety and financial compliance burdens being proposed for deepwater drillers.

At a time when every respected study agrees on the need to increase all sources of domestic energy, offshore drilling bans, excessive regulation, and higher taxes and fees on oil and gas production will do just the opposite.