

Drilling by the Numbers:

The Economic Impact of Gas Exploration Offshore of Mississippi

A brief talk given at the 12 Miles South Coalition Rally,
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Introduction

There are a lot of numbers floating around these days about drilling, but most of us don't have a grasp of the meaning of those numbers. What I want to accomplish in the next few minutes is to give you an understanding of some of the real issues involved in drilling for gas offshore from Mississippi — to present some numbers you may have heard before in more approachable terms, hopefully to present some numbers you may not have heard before, and to describe one or two other issues that I think are important to the issue of offshore* drilling but which haven't managed to make it into the sound bites we hear on WLOX.

This talk comprises three main points and a recurring theme. The first point concerns the answer to the questions "how much oil and gas are we talking about offshore?" and issues related to the importance of this amount. The second point concerns the answer to the question "what are the likely costs and benefits for the state?" The last point touches on some issues relevant to drilling which aren't really quantifiable.

The recurring theme of this talk is

**In spite of what certain politicians will tell you, your mom was right:
You can't have your cake and eat it, too.**

Technology can do many wonderful things, but it cannot repeal the basic facts of life. There is no free lunch. Please try to keep that in mind whenever someone talks to you about drilling. If our governor and legislature did, we'd be in much better shape as a state.

* I use the term "offshore" here to mean drilling in the Sound, on and under the islands, and south of the islands in state waters — in short, everything south of the mainland belonging to the state.

Point 1: How much oil and gas are we talking about?

Oil

First, as a matter of clarification, it should be noted that the oil and gas companies insist that they are not interested in drilling for oil in state waters. Since most interest in drilling in Mississippi state waters appears to have been generated by successful gas drilling in Alabama waters, we can probably take them at their word — Alabama waters have yielded no oil in any significant quantity.

However, while **discovery of significant oil deposits in Mississippi state waters is extremely unlikely**, it is true that, were the producers to find even small amounts of oil on drilling in leased blocks, nothing could be done to stop them from setting up production rigs once drilling has been permitted under current statutes and procedures.

Natural Gas

As a result of some existing seismic studies dating from the 1970s and 1980s, of general knowledge about the geology of the Gulf, and of extrapolation from recent natural gas drilling experience in Alabama, we do have a fair idea of what to expect from gas drilling in Mississippi offshore. An interdepartmental research center at Ole Miss called the Mississippi Mineral Resource Institute (MMRI) released an analysis in 2004 estimating potential gas reserves in state waters based on these existing seismic studies and on statistical analysis.

That study suggested **there may be about 350 billion cubic feet of natural gas in Mississippi offshore**. Now I personally have some reservations about techniques used in the MMRI study, and I believe statistical evidence which would lead to lower projections was omitted from the study. But let's not quibble about it. The gas industry seems to believe it's a reasonable estimate, since this is the basis of the public claims they have made to promote offshore drilling.

So how much is 350 billion cubic feet? Sounds like a lot, I know. But let's put that number into more useful terms.

- Many of our legislators were prompted to favor drilling by looking enviously at Alabama's offshore drilling revenues. Alabama's reserve is considered a small one at 5.3 trillion cubic feet. But **Mississippi's offshore reserve is less than 1/15th the size of Alabama's small reserve**. That's truly tiny.

- Here's a better way to look at it. It will take about 10 to 20 years to completely pump our offshore reservoir dry. The U.S. today consumes 23 TRILLION cubic feet of natural gas every year, and demand is expected to grow to 30 trillion cuft over the next few years. **That means every year of drilling near our wilderness islands will only produce enough gas to satisfy US demand for 5 to 7 hours**. After 10 to 20 years, all the gas will be gone. **And every drop of gas they pumped out of state waters over that period will have been enough to supply the US for only between 4 and 5 days**.

That's how much we will have gained in exchange for our wilderness islands — 4 days of gas for the country. This is the choice we are being given.

Putting It in Perspective

- 4 or 5 days of oil extracted over 20 years isn't going to solve the so called "energy crunch" drilling proponents point to.
- It's not going to affect the price of gas — or of gasoline, or of uranium, for that matter — one iota.
- Our representatives who claim we "need the energy" know better: Even the gas and oil industry has been very up front about the fact that the state's offshore gas reserve is too small to contribute anything to prices or supply.

This is a local issue pointing to a much more serious national issue, folks:

- The US is exhausting its domestic oil and gas reserves. We received the warning bell in the oil crises of the 1970s, but we mostly ignored it. World gas reserves are better off (which is why we will be forced to LNG), but will experience the inevitable production peak and decline in about 15 years. That means in 20 years or so natural gas prices will begin to explode, and countries will begin to jockey for control of the remaining reserves.
- THAT's when we'll need our domestic reserves most. But by drilling and consuming our gas reserves today, we guarantee that we won't have them tomorrow, when they're REALLY needed. That's bad policy in the energy game. The winning strategy is to burn the OTHER guy's reserves while they're relatively cheap.

So instead of talking about drilling our tiny offshore reserve today for the illusion of "energy independence", consider doing something that won't leave your kids and grandkids 100% dependent on foreign sources — something really patriotic:

- Take Mississippi's offshore reserve and make it off limits to drilling. Set aside a small number of domestic reserves (say, under National Parks) for a time when our country will desperately need them.
- And then do your part to conserve gas and oil, and encourage Americans to put our noses and pocketbooks to the grindstone to develop and deploy alternative energy sources to deal with our foreign oil and gas dependence head on.

Remember: **If we allow the gas near the islands to be drilled today, it will be gone when we really need it — when even a tiny reserve could make a difference.** You can't have your cake and eat it, too.

Point 2: What are the Costs and Benefits for the State?

There being No Free Lunch, let's look at the benefits for the state claimed by drilling proponents. Then let's consider the costs drilling proponents haven't spoken up about, and weigh the likely outcome.

Benefits

For the Local Area

Before we look at benefits for the state, let's cover an important issue: Why aren't we talking about the benefits to the Coast? Why aren't even drilling proponents talking about the benefits to the Coast and the Coast's economy?

The reason is that there ARE no benefits for the Coast:

- Won't solve the so-called "energy crunch"
- Won't affect the price of natural gas
- Won't provide any significant jobs:
 - Rig servicing and gas processing will be handled by existing facilities in place in Alabama and Louisiana. From the perspective of gas companies, it would make no sense to build new facilities just to handle the relatively few rigs in MS waters.
 - The number of jobs on the rigs themselves would be few, and unemployment on the Coast is already quite low. Workers to fill those few jobs would most likely be drawn from Alabama and Louisiana.
 - The relatively small payments to the three coastal counties from severance tax amount to on the order of \$10 per year per household over the life of the reserve.

The Coast is where the drilling would happen. What kind of economic development doesn't provide any benefit to the local area?

For the State

Let's start with the benefits claimed by proponents: **Oil and gas companies claim the state would make between 200 and 300 million dollars on the whole deal in severance tax and royalty revenues over the life of the gas reserve.** Now I think that sounds like a lot of money. Even the MDA couldn't squander all that on defunct beef plants --- I don't think. But in reality that money isn't quite what it seems.

First consider the assumptions made in calculating it. It's based on current prices. The Fed's just passed an energy bill that makes it almost certain we will soon see LNG facilities constructed on a large scale to bring in foreign gas. Many experts in the field believe once LNG plants are in place, the price of natural gas will tumble, possibly by as much as half. That *was* the point of the Congress' inclusion of LNG in the energy bill, after all. While world gas production will likely enter a decline 15 or 20 years from now, today it's quite plentiful. That means the Governor and MDA have timed development of Mississippi's offshore gas reserve to happen at possibly the worst point for prices over the next 50 years. That 200 to 300 million could turn into something closer to 100 to 150 million.

For now let's forget the LNG plants. That \$200 to \$300 million is revenue spread over the life of the reserve. It will take 10 to 20 years to pump out all the gas. **That means state revenue from drilling will be from \$10 million to \$30 million dollars per year — let's call it \$20 million.**

But even these numbers are before subtracting out the state's costs of doing business: Governor Barbour, the MDA, and even the DMR have been quick to assure us that they won't let anything bad happen to our islands, our Sound, our Gulf. I assume this means they have a tough environmental enforcement effort planned, with adequate staff and funding. And based on Alabama's experience, where at least one oil company cheated the state out of a several million in royalties and severance, we'd better have some pretty talented financial policing too. None of which comes cheaply.

Now I will be the first to admit I don't know how much it takes to run a government agency these days. I do know that MDA spends on the order of \$15 to \$20 million just for personnel costs. So I'd say the state will have to spend perhaps \$5 or \$6 million on a credible enforcement and policing operation, to say nothing of security operations for gas rigs lying close to the primary natural gas pipeline running through the Gulf.

Actual on-paper benefit to the state — before considering the costs associated with drilling — comes to a range of \$5 to \$25 million per year — call it \$15 million. That revenue lasts only until the reserve is tapped out after 10 to 20 years.

Costs

Now let's consider the costs the proponents don't want to tell you about. Drilling in the Sound is taking a scenic locale (the Sound), around which an enormously successful tourism and gaming industry has been built up over the last 15 to 20 years, and turning it into an industrial production zone. Up to this point, industrial uses — commercial shipping, sport fishing, and seafood industries among others — have managed to hammer out a workable if sometimes precarious arrangement to sharing this precious asset with the tourism and gaming industries that rely on the aesthetic values of the Sound and islands. But drilling completely tilts the table in another direction. There will be adverse consequences for all the current parties sharing the resource. By far the most significant of these industries in terms of bottom line — and also in terms of adverse impact — is the tourism and gaming industry. For them drilling near the islands would be analogous to putting a heavy industrial park right smack in the middle of Vicksburg National Park — or the Ross-Barnett Reservoir. It's something zoning restrictions and common sense just wouldn't allow.

The problem is that even if the gas and oil companies are perfect angels, even if there is never a single accident contaminating the Sound, just the presence of the rigs will damage the area's tourist reputation. Tourists are a finicky lot. They make their decisions about where to vacation based almost entirely on outward reputation — how else could you decide about whether to visit a place you've never seen?

And how much better than people in most states do we here in Mississippi know that a reputation is a tough thing to rebuild once it's damaged? The problem is compounded by the fact that the people most likely to decide to take their vacations elsewhere are the big spenders who have made Coast tourism such a success. People who have a choice don't choose to vacation in industrial sites like Elizabeth, NJ.

One last comment before we get to the hard numbers. Don't think that just because you and I here in Biloxi may not see the rigs on our way to work everyday, it will all blow over once the rigs are in place. Proponents of drilling under national parks are using our islands as the foot in the door. Governor Barbour and the gas companies will use the Mississippi Gulf Coast as their poster child in the national battle to open drilling under all national parks. And no matter how your opinion falls on that matter, you have to realize that the Coast and our former wilderness islands will be on the pages of the national media for a long time, with pictures of rigs near the islands plastered all over the country along with headlines like "don't let this happen to us."

And now, those numbers I promised you:

- Last year over 11 million tourists visited the Coast.
- Nearly 1 in 10 of that number visited the Gulf National Seashore Islands --- the last wilderness islands left on the Gulf.
- Gaming revenues to the state alone were over 320 million dollars; direct revenue to the state from tourism amounts to more than 500 million dollars, and that's before we even consider employment taxes.
- What this means:

If only 1 in 20 potential tourists decide to go elsewhere, the state will lose over \$25 million dollars (figured conservatively) in direct revenues.

- An associated 5% drop in tourism-related employment will cost the state another **\$7 million** dollars in lost revenues to the state. **That's a total loss to state revenues in excess of \$32 million** if only 1 in 20 potential tourists are turned off by the loss of the last wilderness islands on the Gulf. **That's not even considering the increased liabilities to the state for families thrown into poverty by the loss of jobs.** Note that these numbers don't even take into consideration the fact that the tourists most likely to be lost are those with larger disposable incomes who tend to spend more. The potential loss of state revenue could be much larger than this estimate.

Weighing the Costs and the Benefits to the State

So let's weigh what drilling brings to the table. The upside for the state is somewhere between 5 and 25 million dollars a year in state revenue for the 10 to 20 years the reserve lasts. The downside is a very real — even likely — possibility of loss of over 30 million in revenues to the state due to a tourism downturn from mixed use and degradation of some of our most valuable attractions as a destination. **In fact a drop in tourism of as little as 1 to 2% could swamp any gains from drilling and leave the state with a net loss of revenue.** And remember that once the damage has been done to the Coast's tourism reputation, it will be the gift that keeps on giving. Long after the gas reserve has been exhausted and the gas companies and Haley Barbour have moved on, the state of Mississippi and the Coast will still be living down the image of a paradise spoiled.

These are the costs to the state. Costs to the local area will be much steeper. A 5% drop in tourism would represent a loss of about \$75 million in tourist revenues. These drops would ripple through to affect everything from real-estate values to employment. We have worked too hard to bring the tourism industry to a point on the Coast where we should be able to look forward to growth, not to decline.

The question we should be asking at this point is, **Why isn't the state looking at the big picture?** If the state insists that it is going to sell the gas reserve under state waters, as citizens we should at least be able to demand that the timing of that sale be chosen to maximize the benefit to the people --- not for the benefit of the gas companies. By choosing to drill now rather than preserve the offshore gas for at least another 20 years, the state is offering its citizens a likely loss of state revenues and the Coast a likely loss of hundreds of millions of income in exchange for our pristine wilderness islands, for our reputation as a unique tourist destination, and for our offshore natural gas reserve. Not a very appealing deal for the state, the nation or the Coast.

Point 3: Risks and Unquantifiable Costs

In addition to the more likely costs I just discussed, there are a lot of risks we don't fully understand, and costs that you can't put a dollar figure on. These are the costs I think most of us already understand — the inability to take our kids to the islands to watch a sunset uninterrupted by rigs on the horizon. The loss of something unique and surprising that sets Mississippi apart from its neighbors with their rigs. The loss of yet another piece of our heritage — an unchanged place where you can sit and imagine that you are seeing the things in the way our ancestors might have seen them.

Perhaps even more troubling are the risks we don't understand so well. Indications that mercury seeping up from the wellbores of Alabama's gas rigs is adding to the toxic load found in local seafood there suggest that the already disturbing toxicity levels in local seafood might be driven higher by gas drilling. Concerns about seismic studies destroying the vegetative cover that holds the island together threaten faster erosion of the islands themselves. And new geological theories about the causes of subsidence of coastal lands in Louisiana may link the loss of coastal islands to years of drilling for gas and oil in that state, suggesting that simply by drilling for gas under our wilderness islands we could literally cause them to sink into the sea and disappear forever.

We don't have enough evidence to put numbers on these risks. But the point should be this: **You take risks in life for some potential gain. With no potential gain for the state or the Coast in offshore gas drilling, why would we even consider taking the risks?**

Thanks for your time and attention.