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BEFORE THE SENATE REPUBLICAN CONFERENCE
OFFSHORE ENERGY PRODUCTION HEARING

Introduction

Good morning Senators. I would like to thank you for the opportunity to appear before your conference this morning. The purpose of my comments will be to provide you with an overview of the opportunities and potential challenges associated with opening restricted areas of the Outer Continental Shelf or "OCS."

Overview

Today, the offshore federal OCS produces about 490 million barrels ("MMBbls") of oil and three trillion cubic feet ("Tcf") of natural gas per year. This accounts for about 27 percent and 14 percent of all U.S. oil and natural gas production, respectively. Regionally, some 95 percent of this oil production comes from the Gulf of Mexico ("GOM") region, with another five percent from the Pacific and less than one percent from Alaska. For natural gas, the GOM accounts for 98 percent of federal OCS production.

In addition to making significant production contributions, the federal OCS also serves as a significant source of government revenues in the form of bonus bids, rental fees, and royalty payments – what I will generally refer to as "mineral revenues." Over the past five years, the federal OCS has contributed an estimated $32 billion in mineral revenues, a level of contributions second only to the income tax collections of the Internal Revenue Service ("IRS").

One of the more exciting areas of production within the federal OCS has been in the deepwater areas of the GOM. "Deepwater" is defined as water depths greater than or

equal to 1,000 feet. In 1992, there were six producing deepwater projects accounting for 37 MMBBls of oil production and 87 billion cubic feet ("Bcf") of natural gas production. Today, there are more than 130 active projects operating in the deep water producing over 327 MMBbls of crude oil and one Tcf of natural gas. This is an increase of about 800 percent for oil production and more than 1,000 percent for natural gas production. Some of these projects, such as the fields associated with Independence Hub are operating in water depths up to 9,000 feet – a depth generally considered inconceivable slightly over a decade ago.

As promising as these statistics and accomplishments may sound, the federal OCS is mature areas and without expanded access, will ultimately decline in terms of the contribution they make to overall U.S. energy supplies. It is estimated that the federal OCS accounts for four billion barrels ("BBBls") of proved oil reserves and 15 Tcf of proved natural gas reserves. Technical reserves for the area are much larger and estimated to be as large as 41 BBBls for crude oil and 210 Tcf of natural gas in the lower 48 areas of the OCS alone.

Currently restricted OCS areas could provide substantial and very meaningful contributions to existing offshore reserves. According to the recent estimates by the Department of Energy, reserves in these currently-restricted areas include 18 BBBls of crude oil and 77 Tcf of natural gas, or more than 30 years of consumption at current rates just by itself. On an incremental basis, taking current production declines and consumption increases into account, the estimated resources in these currently restricted areas could provide up to 100 years of energy supplies for the U.S.

While these opportunities sound promising, they won't happen without significant action from Congress as well as the recognition of a number of factors influencing potential development including: (1) the significant capital investments and risks associated with frontier areas; (2) the need for a long-run view in examining the need and timing for opening these frontier areas to development; and (3) the need for policy and regulatory consistency in establishing the rules for operating in these restricted areas one they become available.

Capital Investments and Uncertainty

One of the best ways to describe the significant degree of capital investment required in a frontier area is to use a hypothetical example from the deepwater Gulf. Consider the following hypothetical in which you are offered a potential, but not entirely certain, financial reward for sticking a tin can into a fountain somewhere in Washington, D.C. You will be told the general, but not specific location of the fountain. In order to determine a more specific location for this fountain, you will need to spend millions in maps and surveys to approximate its potential (but not certain) location.

In addition to this locational uncertainty, you will be challenged to hit the fountain from an airplane at an altitude of 30,000 feet with a long straw at the end of which is a drill bit the size of a coffee can. It will cost you about $1.0 to $1.5 billion to get on the plane to hit the fountain, and each time you attempt to hit the fountain, it will cost you $100 to $200 million. If you are lucky, you will only miss the fountain two out of every three times.

This may seem like a silly example, but it is the type of challenge faced when exploring frontier areas. The process can be exciting and employs technologies that rival our space program. The rewards, both financially and in engineering achievement could be considerable, but they are elusive and can come with huge risks and costs.

Not all of the new frontier areas being considered for access in the OCS will confront the specific challenges I just mentioned to you, but they will face a number of other equally daunting, costly, and risky challenges. Many of these restricted areas currently lack: service and supply bases; water transportation such as barges, supply and crew ships; air transportation facilities specific to oil and gas production; platform and structure fabricating facilities; pipe-coating facilities; gas processing facilities; gathering lines; transportation lines; compression; fractionation; just to name a few. While some of these restricted areas may be able to rely on nearby facilities in the near-to-short term, long-run development will be less likely without these considerable infrastructure investments.

Long Term Commitments

None of the infrastructure investments I just noted will simply appear over night. Efforts must be made today to ensure the infrastructure supporting future production will be available at the time those resources come on-line.

Consider that the development process in a frontier area is a multi-year endeavor that can take up to a decade to get to full production, provided all goes according to plan. Permitting, lease bidding, contractual work, and preliminary geophysical work can take several years and has to be conducted in advance of the first drill-bit hitting the seafloor. For the first couple years, test wells are drilled. If successful, this is followed by the development of a series of delineation wells that define the overall geographic and geological scope of the potential play.

The exploratory wells drilled in the early days of the project are then developed and completed into producing wells. But before any of this can happen, there is significant engineering design and fabrication work that has to be completed in developing the production structure, its caissons, topside decks, umbilicals, crew quarters, gathering systems, to name a few of the numerous logistical challenges a developer, or usually set of developers, will face.

The recent experience with Chevron, Devon Energy and Statoil's Jack project provides a case in point. It has taken these partners close to three years, to make preliminary findings that gave these partners the confidence that deeper wells could be profitable. The perseverance and hard work of these partners may pay off given their recent announcement of as much as 15 BBBls in potential reserves for this particular area of the GOM: triple the current estimated GOM proved reserves of four BBBls.

The experience with Jack play highlights one of the big potential upsides of developing frontier areas. Many naysayers maintain that currently restricted areas would only contribute small levels of resources over relatively brief periods of time. A shortcoming in this argument is its failure to recognize the potential for big quantum leaps in technology, ingenuity and our experience that are usually omitted in the resource estimates of these particular areas. A decade ago, no one would have thought that

drilling in water depths of over 1,000 feet would be feasible, let alone commonplace. Nor would anyone have thought that we could double the crude oil reserves in the GOM with a single concerted effort in a difficult-to-understand geological structure. But both have been occurred just within the last several years of effort in the domestic industry.

There is nothing to suggest that similar experiences could not occur in the currently restricted OCS areas. The data and assumptions upon which the resource estimates for the currently restricted areas are based are stale, the prices upon which the economics are based upon have long since been surpassed, and the technologies that can be brought to bear in developing these resources are improving on a regular basis. Clearly these resource assessments cannot capture the intangible opportunities that may be unleashed from domestic industry know-how that has been accumulated for well over a century.

Policy and Regulatory Consistency

The last area that I would like to discuss is creating an environment of policy and regulatory consistency. As I noted before, opening new areas of the federal OCS will require billions, if not trillions of investment dollars, in not only drilling, but a wide range of other supporting infrastructure investments. These investments will only materialize where there is a reasonable expectation of capital recovery and return. Changing tax rules, and mineral revenue mechanisms mid-stream will have meaningful and deleterious effects of capital formation in these potentially available areas. Increasing income taxes and royalty rates will reduce overall returns to investments in these areas and will encourage capital investment in oil and gas exploration in other parts of the world, not here in the U.S.

Over the past few years there have been more and more calls for increased taxes, fees, and royalty rates in order to extract what are perceived to be excess profits from domestic producers. The recent debate is poorly crafted and fails to recognize that the overall mineral revenue process is a joint business proposition between government and industry.

In this business sharing arrangement, government, operating on the behalf of its citizens, are in the position of making offshore resource available to industry for development. Industry then pays the government fees, bonuses, and a percent of the profits (what we call royalties) for the opportunity to take advantage of these resources. The more successful the resource development efforts, the higher the profits for both government and industry. The added benefit, however, is lower cost energy resources for domestic consumption use.

The fundamental question and clear source of confusion that arises in the royalty debate is defining the purpose of the royalty regime: is it to maximize revenues that accrue to the government from oil and gas activities, or is it to maximize the production of lower cost energy resources for its citizens? Unfortunately, the degree to which both of these goals can be attained simultaneous is exceptionally limited.

Conclusions

In conclusion, I want to thank you for the opportunity to provide an overview of oil and gas development opportunities and challenges in the currently-restricted areas of the OCS. The oil and natural gas resources in these areas represent considerable opportunities for bolstering our domestic energy supplies for some period to come. The key to realizing these opportunities rests in understanding that they will not occur by just access alone, nor can they occur overnight once their need gets so desperate that almost all recognize that maintaining these offshore restrictions makes no sense. Actions and leadership needs to be taken today that establishes a reasonable, sensible, and policy-consistent framework for making long-run investments that will result in a steady stream of domestic low-cost energy resources to fuel our transportation systems, homes, business and industries.

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