

Statement  
of

**Charles Davidson**  
**Chairman, President and CEO**  
**Noble Energy, Inc.**

On Behalf of the

**Domestic Petroleum Council**  
**Independent Petroleum Association of America**  
**International Association of Drilling Contractors**  
**International Association of Geophysical Contractors**  
**National Ocean Industries Association**  
**U.S. Oil and Gas Association**

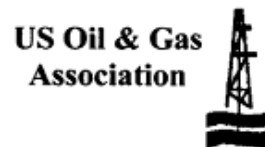
On

**Offshore Natural Gas and Oil Exploration and  
Production Technology:  
Providing Energy, Protecting the Environment**

Before the

**Senate Committee on Energy and Natural Resources**

April 19, 2005



Thank you, Mr. Chairman, for the opportunity to be here today to be part of an increasingly important national energy policy discussion.

I am Charles Davidson, Chairman, President and Chief Executive Officer of Noble Energy, Incorporated, one of the largest independent natural gas and oil exploration and production companies in the United States.

I am also vice chairman of the Domestic Petroleum Council that represents the largest US independents, and I chair the Offshore Committee of the Independent Petroleum Association of America (IPAA) that represents thousands more independents of all sizes. I am providing comments today on behalf of both organizations. Also supporting our testimony are the International Association of Drilling Contractors, the International Association of Geophysical Contractors, the National Ocean Industries Association and the U.S. Oil and Gas Association.

Members of the DPC alone have approximately 4,500 Gulf of Mexico lease interests, including operator designations on some 2,900 leases, 400 in ultra-deepwater (1,600 meters or deeper). With the other IPAA members who are active offshore, you can see that independents are truly leaders in providing natural gas and oil from the US waters that are open to exploration and production. And we are leaders around the world.

The sad fact, however, is that only some ten percent of US waters outside of Alaska are available for us to apply the best energy technology in the world.

Put another way, the United States is the only developed country in the world with our type of “blanket moratoria” areas that have prevented even the consideration of energy development for decades.

When we began placing coastal areas off limits to energy development in 1981, many of the technologies we use today were not available – and perhaps not even imagined. Today we have an important opportunity to focus on the future – and different policies that may allow careful consideration of offshore energy activity in selected areas – building on exciting technology improvements.

Today I want to build on that point, and in doing so answer a number of questions about the 21<sup>st</sup> Century technology that

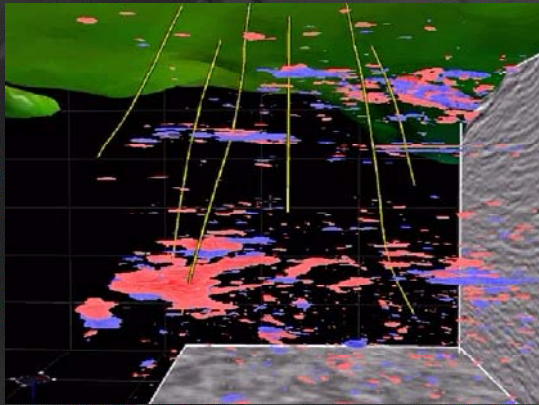
- increases our ability to find resources;
- decreases the number of wells needed in both exploration and development of those resources;
- decreases the need for surface facilities;
- decreases the visibility of our operations; and,
- does all this in ways that are very compatible with the environment.

In the few minutes I have, I would like to touch on each of these topics.

First, geoscience improvements, including use of 3-D seismic and visualization technologies.

These may also involve the most sophisticated use of supercomputer analyses to allow us to better “see” and understand geology and potential resource

***Enhanced Seismic and Visualization Technologies Improve Exploration Success***



deposits deep underground. These improvements allow better success in finding natural gas and oil, more accurate targeting of wells – meaning fewer, more successful ones – and less capital investment risk.

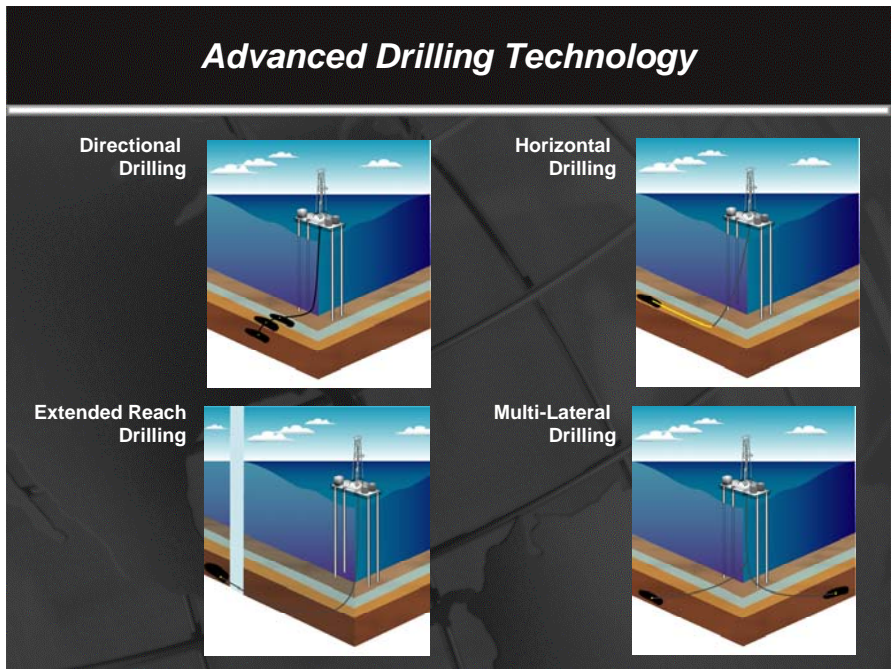
Drilling technology continues to rapidly advance resulting in many benefits, including fewer surface penetrating facilities such as platforms and the ability to develop smaller and more distant reservoirs.

***Advanced Drilling Technology Enables Greater Recovery of Resources***

- **Specialized Drilling Technology Enables Controllable, Far-reaching, Customized Well Bores**
- **Operators Now Capable of Reaching Multiple Targets**
- **Less Disturbance and Fewer Well Bores**
- **Environmental Compatibility**



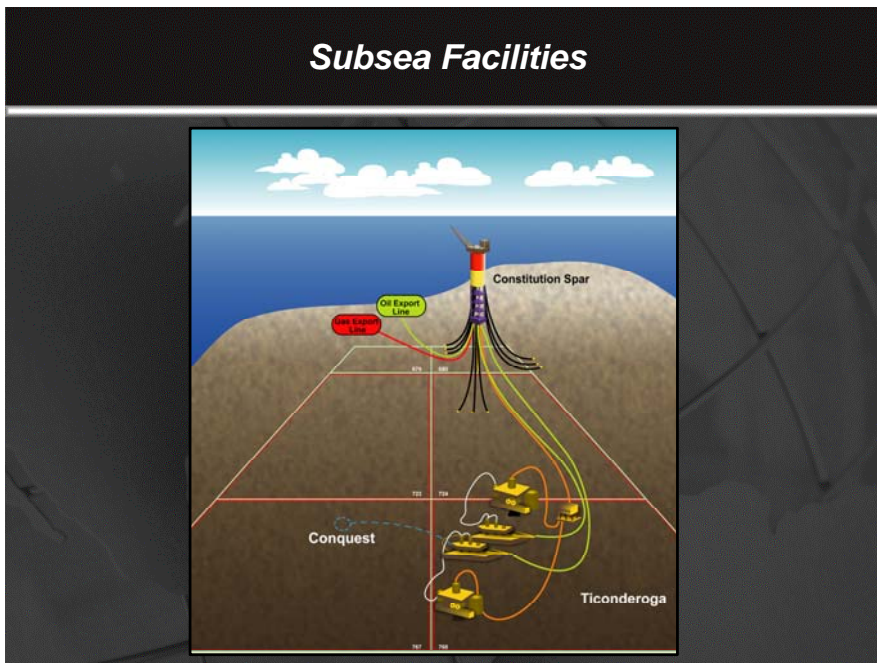
Specific examples include directional drilling that allows development of reservoir or several reservoirs not directly beneath a platform. Other examples are shown in the graphic.



There has also been rapid growth in the number of “subsea” well completions – placing wellheads and other facilities on the ocean floor rather than on the surface.

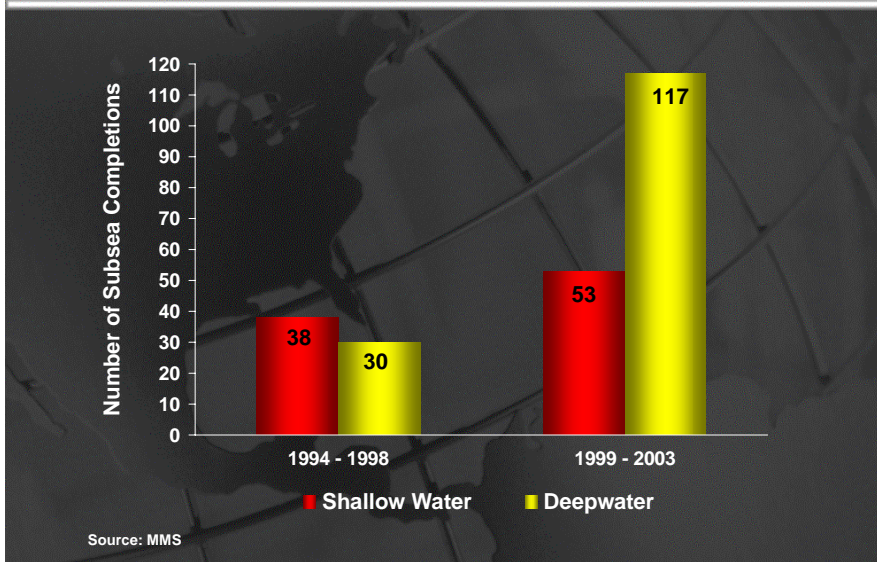
These subsea completions include both shallow water and deepwater production facilities that utilize the latest technology. One benefit is to reduce the visibility of offshore platforms.

One of the best tools for offshore producers in the Gulf of Mexico is the utilization of subsea tiebacks to central manifolds. These tiebacks, some of which



cover over 20-30 miles, allow producers to produce natural gas and oil over great distances from a single production platform. The graphic of the Ticonderoga project, in 5,000 feet of water, provides an excellent example of subsea technology put to use.

## Subsea Well Completions 1994 – 2003 U.S. Gulf of Mexico

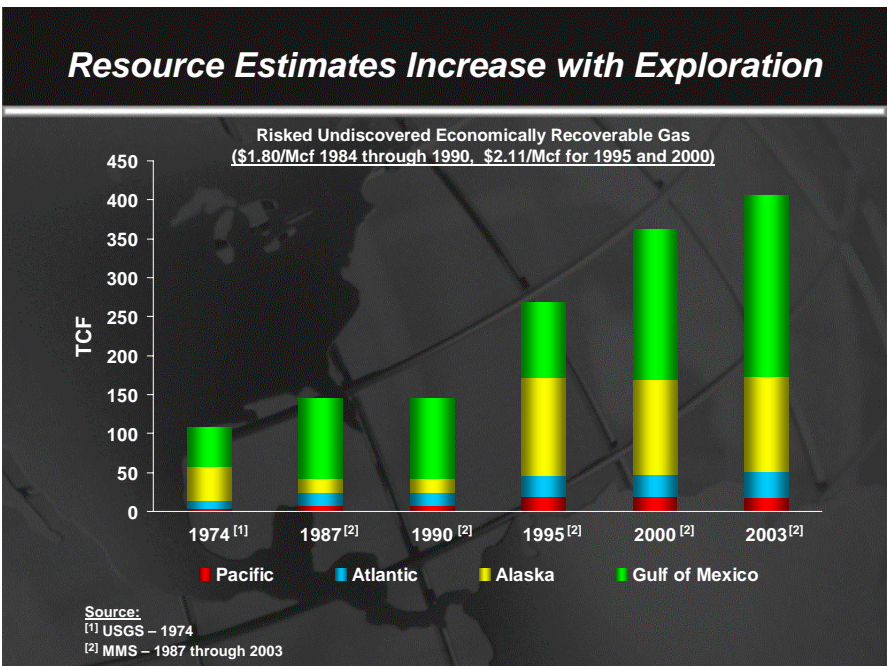


The U.S and worldwide increase in subsea projects has been dramatic. This technology can allow many wells to be produced from fewer facilities, perhaps well over the horizon. In addition, subsea developments enable smaller reservoirs to be developed that were not justified in the past.

Which brings us to estimates of resources in areas under moratoria.

As you see here, our estimates of U.S. offshore resources have grown substantially over time in areas that have been open to exploration.

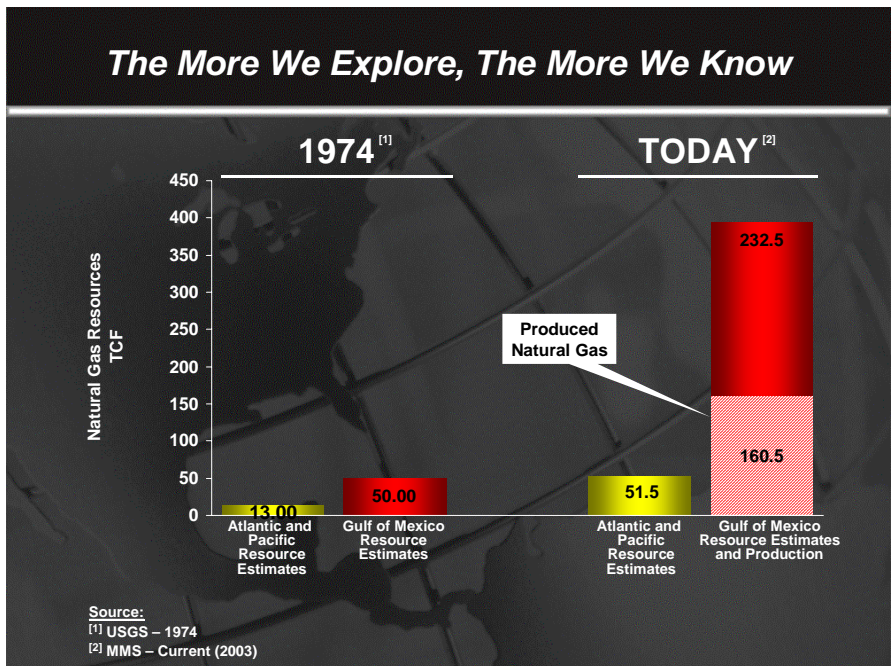
In essence, the more we explore, the better we are able to estimate resources.





Look at the 1974 Gulf of Mexico natural gas resource estimate of some 50 trillion cubic feet. Compare that to today's estimate of 232 trillion cubic feet –on top of the 160 trillion cubic feet that has already been produced from the Gulf of Mexico. We have produced three times what we thought existed in 1974 – and we now estimate almost five times more remaining. The more we explore, the more we know.

(It is interesting to note that the current natural gas resource estimates for the Atlantic and Pacific add up to about what we thought was in the Gulf of Mexico in 1974.)



In conclusion, we are very pleased to see serious discussion of how we as a nation might approach making decisions as to whether to open some additional offshore areas to help meet the energy needs of consumers. We are convinced that the technology used around the world today in the search for, and production of, natural gas and oil will provide a solid underpinning for sensible policies that move in that direction.

Thank you.

I'll be glad to answer questions.