

# BASIC FACTS ABOUT OFFSHORE OIL AND NATURAL GAS

#### NOIA'S MISSION IS TO SECURE RELIABLE ACCESS TO THE NATION'S VALUABLE OFFSHORE ENERGY RESOURCES IN ORDER THAT THEY MAY BE DEVELOPED, PRODUCED AND SUPPLIED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER.



U.S. offshore energy production is an essential component of the nation's energy and economic security. U.S. offshore development accounts for more than 25 percent of the country's natural gas and more than 30 percent of its oil.<sup>1</sup>

Each year, offshore energy development contributes between \$4 and 6 billion in revenues to the federal Treasury.<sup>2</sup> Millions are also paid to states and local communities.

The federal offshore produces approximately 600 million barrels of  $oil^3$  and about 4.5 trillion cubic feet of natural gas annually.<sup>4</sup>

The U.S. offshore industry leads the world in developing and commercializing advanced technologies that protect sensitive environments and improve the quality of life for all Americans.

The U.S. offshore energy industry operates in accordance with the world's most stringent standards for human safety and environmental protection.

Since 1985, more than 7 billion barrels of oil were produced in federal offshore waters with less than 0.001 percent spilled — a 99.999 percent record for clean operations.<sup>5</sup>

Government statistics show that the injury and illness rate for offshore workers is about 70 percent lower than for all of private industry.<sup>6</sup>

Thirty percent of the 15 million fish caught by recreational fishermen annually off the coasts of Texas and Louisiana are caught near platforms. Conservative estimates show annual catches of approximately 450,000 pounds of reef fish annually, valued at approximately \$2 million.<sup>7</sup>





## NATIONAL BENEFITS

Since 1953, OCS development has produced more than 14 billion barrels of oil and 160 trillion cubic feet of natural gas.<sup>9</sup>

Currently, about 25 percent of the natural gas and 30 percent of the oil produced in the United States comes from the federally managed OCS.

Since 1982, \$16 billion in OCS revenues have been paid into the Land and Water Conservation Fund. The National Historic Preservation Fund receives about \$150 million annually in OCS revenues

### **PRODUCING AMERICA'S ENERGY**

The submerged lands of the outer continental shelf (OCS) of the United States have proved to be one of the most bountiful sources of offshore oil and natural gas in the world.

On a per-day basis, the OCS currently produces about 13.9 billion cubic feet of natural gas and about 1.3 million barrels of oil. The federally managed OCS provides the bulk—about 89 percent—of all U.S. offshore production. Five coastal states—Alaska, Alabama, California, Louisiana and Texas—make up the remaining 11 percent.<sup>8</sup>

### **OFFSHORE ENERGY REVENUES ENRICH THE NATION**

Between 1953 and 2002, the offshore energy industry has contributed more than \$145 billion to federal revenues.<sup>10</sup> of these revenues were derived from royalty payments that are assessed on oil and natural gas produced from federal lands — typically one-eighth or onesixth of oil and natural gas' market value. Royalties, rents and bonus payments are collected by the Minerals Management Service (MMS) — which often results in that agency serving as the second largest collector of federal revenues after the Internal Revenue Service.

Although most the revenues derived from offshore energy activity are deposited directly into the federal Treasury, these revenues are also the source of funds for the Land and Water Conservation Fund and the National Historic Preservation Fund. State and federal agencies use the Land and Water Conservation Fund Act to buy parks and recreation areas. Annually nearly \$1 billion dollars in OCS revenues flow to this program.

Likewise, the National Trust for Historic Preservation has received more than \$2.5 billon in offshore energy proceeds to help preserve historic legacies since 1982.11 Like the Land and Water Conservation Fund, money from the National Historic Preservation Fund is distributed to states whether or not they have any offshore leasing or production seaward of their coasts.

Coastal states in producing areas also have a direct claim on OCS revenues under Section 8(g) of the Outer Continental Shelf Lands Act For leases on the submerged lands lying outside the 3-mile state zone and as far as 10 miles offshore, 27 percent of the royalty, rent and bonus revenues are



The 8 (g) revenuesharing agreement has distributed more than \$3 billion to coastal states since 1986, and \$108 million in 2000 alone.<sup>12</sup>

> Offshore development accounts for some 170,000 jobs!

Since 1985, more than 7 billion barrels of oil were produced in federal offshore waters with less than 0.001 percent spilled — a 99.999 percent record for clean operations. <sup>15</sup> paid directly to the adjacent states. States have used these funds for a variety of programs. Alabama established the "Forever Wild Program" with offshore leasing and production money to acquire, maintain, and protect unique habitats. Mississippi has a similar "Gulf and Wildlife Protection Fund" and Louisiana uses its money for education.

### **EMPLOYMENT**

The Gulf coast of Texas, Louisiana, Mississippi and Alabama is the birthplace of offshore prospecting for oil and natural gas, and the economic benefits of that development continues to accrue to that region to the present day. There are more than 85,000 jobs that are directly related to the industry, and an equal number of workers employed in supporting jobs indirectly related to OCS activity.<sup>13</sup>

The average salary and benefits for workers of producing companies employed as a direct result of activity in the Gulf of Mexico was estimated to be \$52,580 in 1992. (The last year for which statistics are available.)<sup>14</sup> Since then, a shortage of skilled labor due to the recent boom in industry activity has pushed earnings even higher. In addition to payroll expenditures, producers pay several billion dollars each year to vendors and contractors who support OCS activities.

# SAFETY AND ENVIRONMENTAL PER-FORMANCE

The National Academy of Science's National Research Council recently released the results of a comprehensive study entitled, Oil in the Sea III: Inputs, Fates, and Effects. The report finds that although the amount of oil produced and transported on the sea continues to rise, improved production technology and safety training of personnel have significantly reduced both blowouts and daily operational spills. In fact, the report states, today, accidental spills from platforms represent only 2 percent of petroleum inputs in U.S. waters and about 4 percent worldwide.<sup>16</sup> Furthermore, the MMS has found that most spills are quite small — with the median being three barrels or less. Between 1971 and 2000, 41 percent of all spills were less than three barrels in size, 81 percent were less than 10 barrels, and 96 percent were less than 100 barrels.<sup>17</sup>

The industry remains under intense scrutiny by its two primary regulators — the MMS and the U.S. Coast Guard— as well as a host of other governmental





agencies with oversight responsibilities such as the Environmental Protection Agency and the National Oceanic and Atmospheric Administration. However, it is the MMS that regulates all exploration, development, and production activities on about 8,000 active leases to ensure that these activities are conducted safely and in an environmentally sound manner. The MMS reviews and approves industry exploration and development plans before allowing any operations to commence, monitors all lease operations to ensure that industry is in compliance with relevant requirements, and conducts scheduled and unscheduled inspections. In 1997, MMS conducted over 12,000 inspections of OCS facilities.

# **INNOVATION BOOSTS U.S. ENERGY**

### THE DEEPWATER

Between 1996 and 1999, technological advances coupled with economic incentives passed by Congress under the 1995 Deepwater Royalty Relief Act, encouraged energy companies to acquire more than 2,600 leases in waters 800 meters or greater pushing the total number of leases in the Gulf of Mexico to more than 7,000.

The number of deepwater exploratory wells drilled more than doubled from 1996 to 1998, despite the limited number of rigs that can work at such water depths and the decline in crude oil prices during this time period. During that same period, production from deepwater wells jumped 50 million barrels, bringing total Gulf of Mexico deepwater oil production to more than 570 million barrels in 2001— nearly a 535 percent increase from 1995. By 2002, deepwater activity contributed 959,000 barrels of oil and 3.6 billion cubic feet of natural gas per day to U.S. energy supplies — approximately 61 percent of the Gulf's total production.<sup>18</sup>



Innovative technological leaps have enabled this thrust into ever-deeper waters. Floating drilling rigs and production platforms are now able to maintain position over top of a well thousands of feet below without the need to moor a fixed structure to the ground. Dynamic positioning systems use computer-controlled directional propellers compensate for wind, wave or current to keep the vessel stationary relative to the seabed, while innovative hull design maintain stability even in "hundred–year" storms.

As a result, drilling is now taking place in waters more than 10,000 feet deep, an accomplishment that would have been unimaginable just 20 years ago. Since 2001, industry has announced 11 major discoveries in waters exceeding 7,000 feet.

### THE DEEP SHELF

Trapped more than 15,000 feet within the earth's crust, so-called "deep natural gas" represents a tremendous untapped domestic energy resource. Government studies estimate that there could be more than 20 trillion cubic feet of untapped deep natural gas deposits in the Gulf of Mexico— about as much as is currently being produced from all areas in North America on an annual basis!

Annual gas production from Federal waters of the Gulf of Mexico has exceeded additions to proved gas reserves every year since 1984, causing a decreasing trend in remaining proved gas reserves. New discoveries of deep gas on the OCS offer the best short-term opportunity for achieving the large reserve additions and necessary high flow rates to offset declining gas production, which has been falling since 1997. Recent deep gas discoveries on the OCS have shown these new completions can produce as much 20 to 80 million cubic feet per day.

Since the Deep Water Royalty Relief Act passed in 1995, more than 2,600 tracts have been leased in water depths of 800 meters and greater. Innovation Boosts U.S. Energy

Unfortunately, despite significant advances in deep gas technology, these prospects remain very challenging to find and develop successfully. Since 2001, Gulf natural gas production has decreased from 5,128 BCF to 4,175 BCF in 2003. Deep gas discoveries may help reverse this trend however: deep gas production increased from a relatively low 284 billion cubic feet in 2000 to 421 billion cubic feet in 2002.<sup>19</sup>

### **NEW LIFE FOR THE "DEAD SEA"**

As recently as the late 1980s, many experts agreed that oil reservoirs in the Gulf were drying up. With oil and natural gas output slackening,



some dubbed the Gulf of Mexico the "Dead Sea". However, leading edge technologies breathed new life into the Gulf — technologies that have enabled more efficient exploration in deeper waters and production from the deepest recesses of the earth's crust. Now the Gulf is widely recognized to be among the most promising areas in the world and oil production levels have increased sharply every year since 1996.

Leading edge offshore technology helps the country to find and produce the energy to heat our homes, fuel our cars, run our computers and drive the economy in faster, safer, cleaner and more efficient ways than ever thought possible. These innovations began with the natural gas and oil industry but they enrich the lives of all Americans.

As the leading technological laboratory in the oil industry, the Gulf's transformation provides an interesting snapshot of the advances that have reverberated around the world and helped to keep energy abundant, affordable and clean.

### **ENDNOTES**

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