

# *MMS Today*

*Winter 2003*

## Energy & Science



**MMS and the Department look at challenges on the horizon**

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# Message from the Director



*Johnnie Burton*

*As we approach the new year we are in the midst of a national debate on the appropriate use of our energy resources.*

*The comforts and advantages energy affords, from powering computers to refrigerating vaccines, are a key to our national prosperity.*

*As our society flourishes, the demand for energy increases. Convenience, comfort, and security all comes with a price -- and often that price is energy. Too often though the national debate about energy revolves around the contention that "they" are using too much energy and if only "they" would use less, the consequences of our energy dependence would go away.*

*This argument has the effect of removing the issue from where it should be — on the American people. If we are going to increase our energy awareness we must initially recognize that "they" are "us" — that the fossil fuel and renewable energy resources we consume are not confined to any one industry or segment of our economy.*

*The American people must be part of the decision making process. We must think about how we use energy in the conduct of our daily lives. For example, we use energy to heat and cool our homes, grow our food and cook our meals; to provide power for our hospitals, schools and workplaces; and to fuel our vehicles. Energy is integral to many of the choices each of us makes everyday. It allows us to take care of our families and provide for their future.*

*Most people's experience with the ocean comes from time they have spent at the beach engaging in water sports and perhaps in a little recreational fishing.*

*My view is a little different. I see the offshore area as a national resource that is a vital component of our energy and economic security. Public lands have been a secure source of oil and gas for over 50 years and today the Outer Continental Shelf is one of the nation's largest source of oil and natural gas. The area currently provides about 28 percent of the oil and 25 percent of the natural gas that we produce domestically. This percentage is likely to increase in the coming decade because more than 60 percent of the nation's remaining oil and gas is offshore.*

*In addition to an energy and recreational resource, our coastal areas are also high-ways of national and international commerce, a growing source of food, and a front line in our national defense effort. As a land manager for the mineral resources of our offshore areas — over 1.7 billion acres — the MMS has to make choices on a daily basis that balance the competing interests of energy production, natural resource preservation, vessel traffic, recreational activity, commercial fishing and national defense.*

*With 90 percent of the U.S. population projected to live within 100 miles of the coast by the year 2025, the pressure for coastal and ocean development is bound to increase. Already there are proposals for expanded and new development of our offshore areas -- like sand for coastal protection and renewal, offshore terminals for natural gas imports, floating supply bases for the domestic oil and gas industry, production of food from fish farms, and harvesting of marine organisms for pharmaceutical production, to name a few.*

*When MMS considers the choices that confront us in developing offshore leasing plans, a rigorous process of analysis is required that not only relies on the Outer Continental Shelf Lands Act from which MMS derives its regulatory authority, but also on the provisions of over 20 laws and executive orders issued and amended over the last 30 years.*

*The demand for energy continues to increase. In order to preserve our way of life, we need to fuel a growing economy and protect our homeland. The increasing demand for energy has to somehow be satisfied. When we deny small-scale development in one area, larger scale development will likely occur somewhere else. When we prohibit development in our country, we often are not choosing to use less energy, but are making a choice to encourage development overseas and import energy across the oceans from distant sources, sometimes from nations with less rigorous environmental and safety regulations than ours.*

*The tradeoffs we make when removing potential natural resources from use must be examined carefully to ensure they are in our favor. We should commit ourselves to the wise use of our natural resources. This should certainly include a solid commitment to conservation of energy and preservation of nature's bounty. It must also include a commitment to support development of renewable energy sources.*

*We must all be a part of the solution as we consider the widest range of options possible for the nation's energy basket.*

# Norton: We all have a stake in our energy future

*by Gale Norton,  
Secretary of the Interior*

*Energy sustains our nation's economy, providing us the highest standard of living and quality of life in the world. At the flip of a switch, the lights in our homes and businesses come on. With the turn of a dial, our homes are heated or cooled to provide us the comfort we seek.*

*Almost everything we do revolves around some form of energy, from the computers we work on, to the vehicles we drive, to the appliances that we use to prepare our meals, and the technological systems we use for our national security. Energy plays a vital role in our daily lives.*

*Because we have traded horses for horsepower and candles for lightbulbs, energy has become a critical necessity. It takes many of our resources, huge imports from abroad, and a great deal of ingenuity to meet all of the nation's energy demands.*

*For example, the United States uses 19.5 million barrels of oil a day—more than double the 7.7 million barrels our nation produces each day. To make up the shortfall, we import a record high 57 percent of our oil from foreign sources.*

*Over the next 20 years, U.S. oil consumption is projected to grow by more than six million barrels per day, while production, if it follows the pattern of the last 10 years, is expected to decline by 1.5 million barrels per day. By 2020, if current trends are allowed to continue, we could be importing 67 percent of our oil.*

*The outlook for natural gas is similar. In the next 20 years, U.S. consumption is projected to grow by more than 50 percent, while production, if it tracks the rate of the last 10 years, will grow by only 14 percent.*

*These figures clearly reveal that U.S. energy production is not keeping up*



*with our growing consumption—with the needs of our families, our communities, and our nation's economy.*

*This fundamental and alarming imbalance between supply and demand increases our dependence on foreign sources of oil, leaving us vulnerable to supply disruptions and price fluctuations.*

*California's brownouts and nationwide price spikes in heating oil and gasoline not only are costly and disruptive but also are warning signs of a larger danger.*

*In October, the Department celebrated Energy Awareness Month to underscore the seriousness of the challenge facing America and the need for action. Where will we get the power that fuels and sustains our way of life? Why are we increasing our dependence on foreign sources of energy, when we have the domestic resources to meet our needs?*

*While we don't think about these questions when we are flipping the switch and turning the dial, we all have a personal stake in America's energy security and should be concerned about the nation's long-term energy problems.*

*These issues must be resolved*

*by our national policymakers.*

*Righting the imbalance between our supply and demand to prevent a future energy crisis is a major focus of President Bush's National Energy Policy, which lays out a balanced, comprehensive, long-term strategy for securing America's energy future.*

*The President's strategy recognizes that our energy problem is inextricably tied to each of our lives and wants to protect families from wild fluctuations in energy prices and help them deal with rising energy costs by diversifying our energy supply, increasing conservation and the use of renewable resources, and reducing our surging reliance on foreign oil.*

*The policy is built on three core principles: it uses 21st century technology; it is designed to meet the needs of future generations; and it will provide reliable energy while at the same time protecting the environment.*

*The strategy is designed to help bring together business, government, local communities, and citizens to promote dependable, affordable, and environmentally sound energy supplies.*

*Half of the recommendations aim to improve energy efficiency, renewable energy, and conservation programs.*

*Contrary to the cherished myth that energy production and the environment must always involve competing values, we believe that American ingenuity and technological advances can enable us to produce energy and provide jobs for the American people while providing a clean environment for our citizens and their families to enjoy.*

*There is no one single solution. Our response to this challenge will require diligent, concerted efforts on both the supply and demand sides of the nation's energy equation.*

# Developing energy through innovation

staff report

One of the administration's top priorities is to promote environmentally safe energy development. The reason: Energy consumption is fast outpacing production.

"While new sources of energy may be on the horizon, oil and gas will continue to play a key role in our lives during the next 20-30 years," says MMS Director Johnnie Burton.

Natural gas is the fastest growing energy source because of increasing demand for electricity generated by clean and efficient gas-fired plants.

Unlike crude oil supplies, imports of natural gas cannot increase fast enough to meet projected future demand.

Sufficient natural gas can only be delivered by pipeline, so the United States must look to North American frontiers, like Alaska and the deep water regions of the Gulf of Mexico, for new gas supplies.

Responding to the nation's energy needs, MMS developed its latest, five-year leasing program for 2002-2007 to outline areas available for production. Agency officials estimate that the new five-year program will make available from 10 to 21 billion barrels of oil and 40 to 60 trillion cubic feet of natural gas. That is enough oil to fuel every vehicle in America for two to five years, and enough natural gas to heat, and cool every home in America for two to three years.

Between 2002 and 2007, MMS plans to hold 20 oil and natural gas lease sales of tracts in the federal outer continental shelf.

## Encouraging development

The President's National Energy Policy calls on MMS to consider economic incentives for environmentally sound oil and gas development. The agency has responded to the call through programs and incentives designed to spur exploration in the Gulf.

For example, vast resources of oil and natural gas may lie under sheets of salt on the OCS, and the agency will provide an extension of time to companies who are exploring for these resources.

Also, deep well gas from the Gulf's nearshore may prove to be a best bet for enhancing natural gas production in the near term. Gas from that area can reach market sooner than gas from deeper water regions because of existing infrastructure. In some cases roy-



Alaska region file photo

Northstar production facility in Alaska. The gravel island is located about six miles offshore in Alaska's Beaufort Sea.

alty relief will be offered to companies producing natural gas from wells in 200 meters of water or less.

MMS is also offering unleased blocks in deep water in the Gulf with specific royalty relief depending on water depth.

## Looking far beneath the oceans' surface

At one time considered an energy resource area in decline, the Gulf of Mexico has become America's new frontier for oil and gas exploration thanks to its deep water reserves.

The phenomenal rise in oil production from the Gulf has occurred solely because of the increase coming from water depths greater than 1,000 feet. Deep water oil production grew over 23 percent to 335 million barrels in 2001 as compared to 2000.

In 1985, only six percent of the Gulf's oil production came from deep water fields. Today it's over 50 percent.

Natural gas production from these areas has also increased from less than one percent of total production in 1985 to over 20 percent in 2001.

Beyond representing an untapped source of energy, deep water wells can also be a boon because of their high flow rates and large size of the fields. An average shallow water oil well flows at just over 100 barrels per day, whereas a deep water field like Ursa produces about 30,000 barrels per day.

A single deep water gas well can produce about 100 million cubic feet of gas per day versus two million cubic feet per day in a shallow water well.

Additionally, the number of wells drilled in ultra deep water, that is, 5,000 feet or more, continues to grow. There were a record 10, ultra deep water wells in 2001.

## Turning to Alaska

The year 2001 ushered in the first production from federal waters in Alaska with the Northstar project in the Beaufort Sea.

Northstar produces from both state and federal leases and is projected to produce 175 million barrels of oil.

The Northstar pipeline is the first buried subsea pipeline in the arctic to be used for full time production. It is seven to 11 feet below the seafloor to avoid ice impacts. Northstar uses innovative technology to protect the environment, including sophisticated monitoring equipment sensitive enough to detect very small leaks.

New developments throughout the OCS are an encouraging sign that MMS is making progress in doing its share to meet America's energy needs in coming years.



# Moving forward with an eye on conservation

*staff report*

Increasing production and the search for energy are just part of the equation both for the National Energy Policy and for MMS's mission. The nation's mineral resources are significant but they are also finite and nonrenewable. That is why conservation is a key component of the agency's policy and efforts.

MMS environmental scientists are involved in all phases of OCS activity. Their work extends to the development of five-year leasing programs, preventing oil spills, assessing environmental impact of new production and platform removal.

The agency's Environmental Studies Program finds appropriate solutions where industry activities could adversely affect natural resources. This allows for development to continue while the environment is safe-guarded.

In fact, OCS operators have produced over 7 billion barrels of oil since 1985 and spilled less than .001 percent of this oil, or 1 barrel for every 102,000 barrels produced. The agency continues to work with industry to improve this statistic even further. MMS has a long-standing safety and environmental management program to ensure clean and safe offshore operations.

To achieve energy conservation goals, the National Energy Policy emphasizes getting the most out of existing

wells through new technology. MMS and industry are exploring research opportunities on drilling and completing extended reach and multilateral wells to minimize the size of production facilities and avoid unnecessary creation of new platforms. Extended reach drilling is already used extensively on Alaska's North Slope.

## **Protecting all resources**

While MMS conservation efforts involve stewardship of our mineral resources, management of the offshore environment also has implications for preserving lives and historical treasures alike.

The safety of offshore personnel is a primary concern for the agency. Since the agency's creation in 1982, MMS has worked closely with industry to reduce the number and severity of accidents at sea.

Seventy inspectors go offshore every day the weather permits. In 2001, inspectors conducted nearly 17,000 inspections. When offshore operators are found to be in violation of safety standards, penalties are issued for non-compliance.

MMS also requires that industry submit detailed plans for pipelines and platforms before construction can begin.

These plans include detailed surveys of the seafloor along the construction site.

These surveys have led to the discovery of more than 100 shipwrecks on the floor of the Gulf of Mexico including the Civil War Union gunboat *USS Hatteras* and the recent discovery of a German U-boat in 5,000 feet of water 45 miles from the mouth of the Mississippi River.

But conservation doesn't begin and end with offshore interests. The revenue collection arm of the agency — Minerals Revenue Management — is responsible for collecting and disbursing mineral revenues from federal and Indian leases.

These revenues totaled nearly \$10 billion in 2001 and more than \$120 billion since the agency was created in 1982. Annually, nearly \$1 billion from those revenues go into the Land and Water Conservation Fund, a portion of which is used to acquire and develop state and federal park and recreation lands.

Monies going to the states are used as the states deem necessary, oftentimes for schools, libraries, roads, and public buildings. Revenues collected on American Indian lands go directly to the tribes or individual Indian mineral owners, meeting a wide variety of their needs.

*file photo*

# Congressional News:

by Lee Tilton

The 107<sup>th</sup> Congress wrapped up its work on legislation and appropriations and adjourned in late November. Listed below are the status and highlights of various bills that MMS followed, some of which may come up again during the 108<sup>th</sup> Congress.

## Comprehensive Energy Legislation

**(H.R. 4)** – The conference was unable to reach agreement before adjournment, so there was no energy legislation enacted in the 107<sup>th</sup> Congress. However, comprehensive energy legislation may again be introduced in the 108<sup>th</sup> Congress. MMS interests with respect to the legislative proposals in the 107<sup>th</sup> Congress bills include:

- **Deep Water Royalty Relief**—mandates specified volumes of royalty relief for 2 years for new leases issued in the Gulf of Mexico (west of the Florida/Alabama line) that are located in water depths of 400 meters or greater.
- **Royalty in Kind** – The House version of the bill would, among other things, provide MMS with permanent authority to pay for certain services related to the disposition of RIK volumes from the proceeds of RIK sales; the Senate version of the bill does not have such a provision, but, instead, directs the President to use RIK to fill the Strategic Petroleum Reserve.
- **Marginal Wells**—interim program to provide royalty relief to both onshore and offshore oil and gas operations when certain price and timing conditions are met until the Secretary develops a program by rulemaking.
- **Subsalt Provision**—allows the Secretary to grant suspension of operations to offshore lessees who have not first drilled a well in order to allow them time to better interpret geologic and geophysical data beneath salt sheets.
- **OCS Energy Infrastructure Security Program**—the Senate version of the bill contains a provision to set up a program, to be funded by OCS revenues that would be used to implement approved state plans to provide security against hostile and natural threats to critical OCS energy infrastructure facilities.



file photo

- **Ultra-Deep Water Research Program**—authorizes the Secretary of Energy to set up an ultra-deep water (deeper than 1500 meters) and unconventional oil and gas research program and authorizes funding for research and development.

## OCS Alternate Use Energy Legislation

**(H.R. 5156)** – This bill is an Administration/DOI bill related to the siting and permitting of alternative energy and energy-related facilities on the OCS, including renewable energy projects. The bill died at the end of the 107<sup>th</sup> Congress. However, the legislation was not forwarded to Congress until June 2002, and got introduced by Representative Barbara Cubin in July 2002. There was also a hearing on the bill before the House Resources Subcommittee on Energy and Mineral Resources in July 2002.

## Port Security Legislation (S. 1214 and

**H.R. 3983)** – This legislation passed Congress and was signed by the President. There is language included in the final bill that would amend the Deep Water Port Act giving the Department of Transportation authority to handle the siting of LNG facilities on the OCS.

## Terrorism Insurance Legislation (S.

**2600 and H.R. 3210)** – This legislation passed Congress and was signed by the President. It provides for financial protection for insurance companies that of-

fer insurance that protects loss in the event of a terrorist attack.

The final legislation contained language to extend the program to offshore oil and gas facilities located on the OCS and the insurers that provide coverage for offshore operations. Earlier versions of the bill did not provide for such coverage.

## Department of the Interior Appropriations (S. 2708 and H.R. 5093)

– The 107<sup>th</sup> Congress passed a Continuing Resolution to keep the government funded at FY 2002 levels until January 11, 2003. There is one provision in the DOI 2003 appropriations bill of particular interest to MMS that will need to be resolved after the 108<sup>th</sup> Congress convenes in January 2003:

- **California OCS drilling ban**—an amendment offered by Rep. Capps prohibits DOI from approving any plans for exploratory or development activities on the 36 existing, but undeveloped leases offshore California. The amendment passed by a vote of 252-172.
- **California OCS drilling ban**—Senator Boxer offered a non-binding Sense of the Senate resolution to the Senate version of the Department's FY 2003 appropriations bill concerning the 36 existing, but undeveloped leases offshore California. It passed by unanimous consent.

# News in Brief

## Study Available

The agency recently released a comprehensive field study titled, *Northeastern Gulf of Mexico Physical Oceanography Program: Chemical Oceanography and Hydrography, Synthesis Report*.

The study, conducted by Texas A&M for MMS, focuses on water depths between 10 and 1,000 meters from Tampa, Florida, to eastern Louisiana. Main study objectives included:

- Conducting nine cruises and measuring 883 locations;
- Describing distributions of water properties such as salinity, oxygen content, and nutrients like nitrate and phosphate;
- Identifying seasonal variations in water properties; and
- Explaining the processes that control the observations.

Copies of the report (MMS 2002-055) are available at \$25 from the Public Information Office, Minerals Management Service, 1200 Elmwood Park Boulevard, New Orleans, LA 70123, Telephone 1-800-200-GULF.

## New developments in deep water

The oil and gas industry recently set new world water depth records for both pipelines and producing wells.

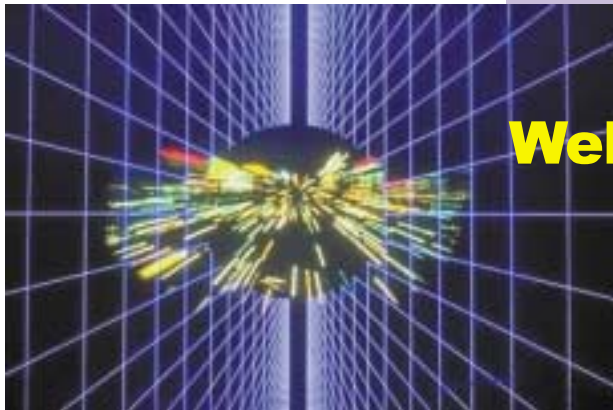
In September of 2001, MMS granted permits to the Canyon Express gas gathering pipeline system (Canyon Express). This pipeline system comprises 32 pipeline segments. Several operators collaborated in an effort to reduce costs in developing three separate deepwater natural gas fields in the Mississippi Canyon and Desoto Canyon areas.

Canyon Express links the Camden Hills, Aconcagua, and Kings Peak natural gas fields. It is anticipated that the peak production rate of Canyon Express will be 500 million cubic feet of natural gas per day once all the wells from these fields are on line.

The Camden Hills field was discovered in 1999 by Marathon Oil Company (Marathon) and is located in Mississippi Canyon, approximately 150 miles southeast of New Orleans. It is the deepest field in the recently completed Canyon Express pipeline system.

Camden Hills consists of two sub-sea wells with flowlines and control systems connected to Canyon Express. These wells began producing in October. Camden Hills is currently producing 100 million cubic feet per day of natural gas.

Marathon set the world record for well production, and TotalFinaElf set the world record for laying a pipeline at a water depth of 7,209 feet. This record exceeds by about 100 feet the previous record set recently by TotalFinaElf in the Aconcagua field.



## Web World: [mms.gov](http://mms.gov)

Check our websites for valuable information about our agency. Offshore, Minerals Revenue Management, environmental studies, lease sales, latest press releases and more.

Go to [www.mms.gov](http://www.mms.gov) and navigate from there.

### Key Links

[www.mrm.mms.gov](http://www.mrm.mms.gov)  
(Minerals Revenue Management)

[www.mms.gov/offshore](http://www.mms.gov/offshore)  
(Offshore Minerals Management)

[www.mms.gov/ooc/newweb/newr.htm](http://www.mms.gov/ooc/newweb/newr.htm) (Newsroom)

[www.mms.gov/ooc/newweb/congressionalaffairs/congress.htm](http://www.mms.gov/ooc/newweb/congressionalaffairs/congress.htm)  
(Congressional Affairs)

[www.mms.gov/library](http://www.mms.gov/library)  
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*(Aletcia Skinner serves as an MMS pagemaster and helped design web world)*



photo Mieke Mahi

## Protecting oceans from oil spills

*Federal government tries to clarify some common misunderstandings*

When it comes to the source of offshore oil spills, there are a lot of misconceptions. The U.S. Department of the Interior's Minerals Management Service (MMS) offers a number of facts about this important issue.

One common misunderstanding has been the recurring notion that offshore oil and gas development is responsible for most of the petroleum pollution found in the earth's oceans.

The truth is that worldwide, the majority of petroleum pollution in the ocean is caused by marine transportation (about 45 percent) and municipal/industrial waste and street runoff account for nearly 36 percent.

Over the past 20 years, less than 0.001 percent of the oil produced from the U.S. outer continental shelf has been spilled from offshore oil production facilities.

Through its regulatory program, MMS is working toward keeping this statistic as low as possible.

Moreover, offshore facilities and pipelines account for only 2 percent of the volume of oil spilled in U.S. waters.

Natural seeps—found where oil and/or natural gas-bearing strata intersect the earth's surface, or where they are tapped by faults and fractures—introduce about 1,700 barrels of oil into the oceans each

day, roughly 150 times more than do OCS oil and gas activities.

Another misconception is that the government does nothing to prevent oil spills.

The opposite is true. MMS places a high priority on environmental, oil spill and safety-related research. Last year alone, the agency spent more than \$5 million on research. During the past 20 years, more than 700 research projects have been funded to ensure that oil and gas development activities on the OCS are conducted in an environmentally responsible manner.

Under Federal law, all offshore operators are required to have oil spill response plans. MMS conducts unannounced drills to test these plans. The agency also requires companies to show adequate financial responsibility to pay for damages if they occur from a spill.

The MMS manages the National Oil Spill Response Test Facility (Ohmsett) in New Jersey, the only facility in the world that tests oil cleanup equipment in a simulated marine environment.

For more information about oil spills and other environmental issues,

visit the website at:  
[www.mms.gov/stats/index.htm](http://www.mms.gov/stats/index.htm).



file photo

The MMS continues to work with other federal agencies to ensure a safe and clean marine environment



# First results in on sperm whale study

by Bill Lang



Two sperm whales “fluke-up” near the research vessel Gyre during the first leg of the 2002 cruise. Sperm whales typically lift their tails as they begin diving for food. These dives can last 45-60 minutes, at depths of 700 meters or more.

photo by Jonathan Gordon for SWSS

Early results are in of a three-year study on sperm whales in the Gulf of Mexico to determine if offshore seismic surveys have effects on these endangered animals. Findings include the successful tagging of a number of whales, coupled with DNA samples and photo ID’s of the marine mammals.

“This research is a result of strong coordination between MMS, the Office of Naval Research, Texas A&M Research Foundation and the International Association of Geophysical Contractors,” said Chris Oynes, Gulf of Mexico regional director. “This coordinated research saves the American taxpayers’ dollars.”

The first year of the Sperm Whale Seismic Study (SWSS) included two research cruises. The first cruise was completed in July and the second cruise departed in August to engage in four-weeks of experiments using digital tags or D-tags. These tags recorded underwater sound levels and swimming behavior of tagged sperm whales. The culmination of this year’s research was exposing four D-tagged whales to distant airguns using an industry-provided seismic vessel.

Past MMS-sponsored studies have shown that nearly a thousand or so sperm whales live in northern Gulf waters and are most often sighted near 1000-meter water depths. As the offshore petroleum industry moves into deeper waters, the potential for interaction with sperm whales and other deep-water cetaceans increases.

The initial SWSS cruise, made on the Gyre, a Texas A&M University research vessel, left port in June and returned in early July. The main tasks of this cruise were to deploy satellite tags (S-tags), collect physical oceanographic data, survey sperm whales by visual and acoustic means, perform biopsies for DNA samples, photograph sperm whale flukes (photo-ID) and record surface behavior.

The cruise enjoyed considerable success. Eighteen S-tags were placed on sperm whales by Oregon State University Scientists. DNA samples were obtained from 16 of the tagged whales along with photographs of their flukes (tails). Altogether, 49 high quality photo images were obtained of 32 different sperm whales. Texas A&M researchers obtained a complete set of planned physical oceanographic data.

The second SWSS cruise attached nearly 20 D-tags – a recent technology developed at Woods Hole Oceanographic Institute with Office of Naval Research funding. The D-tags record sound levels and underwater swimming behavior of sperm whales. The tags provide a unique method to determine sperm whale behavioral responses to test sound sources or ongoing seismic surveys in the Gulf of Mexico.

Initial D-tagging on sperm whales in the Gulf of Mexico and Mediterranean Sea in the past two years already have provided amazing details on normal sperm whale diving behavior and vocalizations. When coupled with all aspects of SWSS experiments, the wealth of discoveries may likely result in a new book on the lives of sperm whales.

In addition to the significant contributions to whale biology, ultimately, results from SWSS will be used by MMS to evaluate what effects seismic surveys may have on sperm whales, whether some areas of the Gulf are preferred locations for whales, and what actions would mitigate adverse effects on these whales.

Year one results of these cruises will be presented at the MMS Information Transfer Meeting in New Orleans in January 2003 with a final report on SWSS from Texas A & M scheduled in early 2005.

visit our website at:  
[www.mms.gov/eppd/index.htm](http://www.mms.gov/eppd/index.htm)  
for more information on the agency’s environmental studies program.

## Washington D. C.

### Studies on benefits of coastal ocean observing system

*Under the auspices of the National Oceanographic Partnership Program the Minerals Management Service is supporting a series of studies to quantify potential benefits to the public of a sustained coastal ocean observing system in nine U.S. coastal regions.*

*In September 2002, a contract was awarded to the Marine Policy Center at the Woods Hole Oceanographic Institution to produce an inventory of the major users of ocean information and a set of region- and sector-specific studies of likely benefits and costs of improving and maintaining coastal observing systems.*

*Products derived from ocean data are used by many sectors to make choices that affect the nation's economic well-being. To determine the extent to which the nation should invest in ocean data collection, it is important to know how new products will alter decisions made by industry, government, and the public. These studies will be based on a common set of assumptions and economic methodologies and results will be aggregated at the national level to enable Federal agencies to determine the optimum budget for coastal observing systems.*

*The new two-year project will be conducted jointly with academic and private sector economists in the following areas:*

<u>Region</u>	<u>Focus Sector</u>	<u>Institution(s)</u>
Gulf of Maine/New England	Search and Rescue	WHOI & Univ. of Southern Maine
Mid-Atlantic	Commercial Fishing	WHOI & Univ. of Southern Maine
Southeast	Storm Tracks	UNC- Chapel Hill
Florida	Recreational Boating	Univ. of So. Florida
Gulf of Mexico	Energy Production	LSU
California	Recreational Beach Use	Univ. of Wyoming
Pacific Northwest	Shipping/Oil Spill Response	Univ. of Washington
Alaska	Search and Rescue	WHOI & Univ. of Southern Maine
Great Lakes	Shipping	Delta Research Co.

*The MMS Environmental Studies Program will be funding the sector in "energy production" in the Gulf of Mexico. Other agencies providing financial support to this project include the National Oceanic and Atmospheric Administration, the Office of Naval Research, the National Science Foundation, and the National Aeronautics and Space Administration.*

*Work done previously by WHOI and the University of Southern Maine concluded that the potential annual economic benefits of such a system for the Gulf of Maine could exceed \$30 million alone. Sectors evaluated, in this previous study were Search and Rescue, Fisheries Management, Recreational Boating and Fishing, Accident Prevention and Oil Spill Cleanup and Mitigation, and Commercial Shipping.*

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## Alaska

# Energy flows from Alaskan federal waters

*Energy. It fuels our cars and our economy. Oil and gas flows through the Trans Alaska Pipeline to refineries in the Lower 48 states. Until now, all of the petroleum leaving Alaska came from state-owned lands. Not anymore.*

*It took more than 20 years but oil finally flowed from the Alaska OCS on January 16, 2002. This is the first production from the federal OCS in Alaska. Northstar is not your conventional production facility. It utilizes state-of-the-art equipment to safely produce oil from the Alaskan arctic.*

*BP Exploration (Alaska) began production of oil from their Northstar facility in the Alaska Beaufort Sea on October 31, 2001. The first well drilled into the federal side of the reservoir began production on January 16, 2002.*

*Northstar will provide up to 175 million barrels of oil to fill the nation's energy gap. That's enough energy to fuel nearly one million automobiles for six years. Northstar produces oil and gas from a gravel island located about six miles offshore in the Beaufort Sea and 12 miles northwest of Prudhoe Bay. Two subsea pipelines in the Beaufort Sea, and onshore above ground pipelines that connect Northstar to existing facilities.*

*About 16 percent of Northstar reserves come from Federal leases. The U.S. will receive approximately \$120 million in Federal royalty. The Federal leases are also within an area call the 8(g) zone. The State of Alaska receives 27 percent of Federal revenues.*

## GOM

# Synthetic moorings to be used in Gulf of Mexico

*The agency recently approved a deepwater oil and gas project that includes the first permanent use of synthetic (polyester) moorings to anchor a platform to the seabed. The approval came as part of a preliminary review of British Petroleum's Deepwater Operations Plan for the "Mad Dog" development project in 4,420 feet of water.*

*The Mad Dog field will use a truss spar employing dry tree wells and the first permanent use in the Gulf of Mexico of synthetic moorings. The synthetic mooring consists of high strength polyester fibers that provide an equivalent or greater level of protection as steel wire rope systems, while reducing the vertical loads on the spar hull. The truss spar is held on location by an 11-line polyester taut-leg mooring configuration.*

*"This approval is an excellent example of how MMS can work with industry to enable the use of new cost effective technology while providing for safety and meeting MMS's regulatory responsibilities," said MMS Director Johnnie Burton.*

## Deepwater's nature

*The offshore technology used in the Gulf of Mexico rivals that used in the space program. Scientists from Columbia University produced detailed maps showing that the seafloor off the U.S. coast is as remarkable and alien a landscape as seen on Mars or Venus.*

*Scientists discovered chemosynthetic communities in the Gulf which have an ecosystem different from the sun dependent photosynthetic life forms. Chemosynthetic creatures live off gases that would kill humans.*

*These discoveries help scientists imagine how life may have evolved on worlds very different from our own.*

*MMS continues to work with industry to explore deep water regions as a source*



Residents of the deep: Tubeworms living off hydrocarbons

*for energy. With exploration comes discovery, and the agency, along with its many partners, is poised to protect fragile marine communities, or archaeological treasures that may be discovered along the way.*

## Energy Fast Facts

- America uses almost **20 million** barrels of oil per day to fuel our automobiles and airplanes, power our factories and generate the electricity needed to heat and cool our homes.
- Nearly **70 percent** of new homes built today are heated by natural gas.
- **3.9 seconds** of OCS production would allow a car to travel around the earth at its equator (25,000 miles)
- **Natural gas** is used to produce much of the **fertilizer** that fuels food production in America's heartland.
- **Oil** from the OCS is also used in making numerous **plastic** products.
- OCS oil production has increased **55 percent** since 1995.
- The OCS provides about **25 percent** of our domestic natural gas and **28 percent** of our domestic oil.
- **50 percent** of leased acreage in the Gulf of Mexico OCS is in deep water (greater than 1,000 feet)
- The deepwater OCS accounts for over **60 percent** of the total Gulf of Mexico OCS oil production and **24 percent** of the total Gulf of Mexico OCS natural gas production.

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