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\*\*\*FEATURE RELEASE\*\*\*

## ARTIFICIAL REEFS: OASES FOR MARINE LIFE IN THE GULF (#40018)

Whether it's an operating platform or an obsolete rig intentionally placed for reef enhancement, a typical 200-foot jacket -- the underwater support structure of an offshore petroleum platform -- provides several acres of living and feeding habitat for thousands of underwater species.

That's a good thing, because the natural characteristics of the Gulf of Mexico include flat and sandy terrain with very little coral and rock, and an obvious lack of natural reefs. Without artificial reefs, fish and marine life would typically become widely dispersed -- far from ideal conditions for commercial and recreational fishing.

As documented by trained volunteer reef research teams, invertebrates and plants attach to petroleum platforms almost immediately. Within six months to a year a newly-placed rig will be completely covered. This, in turn, attracts mobile invertebrates and fish species, forming a highly complex food chain.

From plants to invertebrates to small fish and the larger fish that feed upon them, they are all attracted to artificial reefs that render shelter from water currents, excellent breeding and feeding grounds, and reference points for orientation in an otherwise featureless environment.

But according to Jack Spey, Reef Coordinator for Florida's Okaloosa County, "Man doesn't create artificial reefs -- Mother Nature does. Man can only place vertical structures offshore, which are needed in the Gulf of Mexico so that Mother Nature can take over, and organisms can attach and prosper.

"By placing artificial reefs, man is increasing the capacity of nature to create habitat. Nature is then able to procreate at an increased rate," said Spey.

Unfortunately, obsolete structures are oftentimes towed to

shore and sold for scrap metal. Not only does the scrap value hardly pay for shore-based dismantling and disposal, but the existing artificial reef habitat is eliminated and the associated biological community is seriously affected.

There is an alternative to onshore disposal -- encouraged by the Department of Interior's Minerals Management Service (MMS) -- that could be both environmentally and economically more favorable.

It is the conversion of platforms to permitted artificial reefs, known as "Rigs to Reefs."

MMS, the agency that manages leasing, exploration and development on Federal offshore lands, recognized these benefits early and announced in 1983 its support for Rigs to Reefs. A special Departmental task force was formed called REEFS (Recreational and Environmental Enhancement for Fishing in the Seas), which became instrumental in motivating agencies and organizations to begin planned and organized development of artificial reefs. Rigs to Reefs was addressed by Congress in the National Fishing Enhancement Act of 1984, and a formal MMS policy followed in 1985.

Under Rigs to Reefs, companies donate structures, construct the reefs, and may even donate funds from savings realized.

The structure is most often donated to a state, which takes title to it. The MMS assists by keeping apprised of current activities and serving as an informal source of information for states and petroleum companies regarding the possibilities of donating platforms when leases are terminated.

When a structure is converted, generally 50 percent of the savings realized by a petroleum company is donated to the state Artificial Reef Program and used for related program costs, as well as biological and geological research. All five coastal states bordering the Gulf have Artificial Reef Programs.

According to Louisiana Artificial Reef Program Coordinator Rick Kasprzak, a typical Rigs-to-Reefs conversion results in the program receiving from \$25,000 to \$300,000. Louisiana's program, with 36 conversions, has received a total of \$5.1 million in monetary donations to date; Texas' program has received \$2.5 million. The largest amount donated, \$385,000 of savings, went to Texas this past year when Global Marine Inc. of Houston toppled a jacket off Galveston, Texas.

Such monetary donations, however, are contingent on savings being realized, which is more likely to occur in the Gulf of Mexico where relocation costs are minimal. Conversely, moving a rig to areas outside the Gulf -- for instance to the east coast of Florida -- incurs higher transportation costs and results in less savings, if any. But just by a company donating and transporting a platform free-of-charge, states are still able to save funds, which must often be spent to acquire and deploy artificial reef structures.

Florida -- which leads the Nation in total number of artificial reefs with more than 300 -- has reefs built of everything from ships and airplanes to bridge rubble and buses.

Of all the possible reef-building materials, however, offshore petroleum platforms are deemed most desirable because of their size, shape and design, according to Florida's Dade County Artificial Reef Program Coordinator Ben Mostkoff. The openness of a petroleum structure allows for water circulation and easy mobility for fish inside the structure; it attracts not only bottom dwelling fish, but also mid- to top-water dwellers; and its density puts it among the most stable, durable and reusable materials readily available.

"The result is the same as an oasis in the desert," said Texas Artificial Reef Coordinator Hal Osburn. "Artificial reefs increase viable habitat and improve biodiversity."

Because many manmade reefs utilize "materials of opportunity," some are short lived and may actually collapse in time. Boxcars, for instance, have been found to collapse after only a year or more. But offshore platforms are constructed originally and specifically for the marine environment, and for that reason are secure and reliable.

According to Villere Reggio of the MMS, who helped draft the National Artificial Reef Plan in 1985, "The goal is to encourage states and fishery management planners to select suitable offshore locations where obsolete platforms might continue to serve usefully -- providing an ideal environment for marine life as well as enhancing fishing and diving. Ideally the fish, the fishermen and divers, the petroleum companies, and the states will all benefit from Rigs to Reefs."

## FLORIDA'S HISTORY OF RIGS TO REEFS

The first planned Rigs-to-Reefs conversion took place in Florida in 1979 with the relocation of an Exxon experimental subsea template from offshore Louisiana to a permitted artificial-reef site off Florida. To date, around 60 petroleum structures have been converted to permanent reefs in the Gulf of Mexico. An estimated five platforms have been donated to the State of Florida on behalf of fishery enhancement.

Off the west coast of Florida three permitted Rigs-to-Reef sites exist. An Exxon structure was placed off Franklin County in 1979. In 1982 a site off Escambia County was established by Tenneco. And most recently, a Chevron jacket was submerged southeast of Pensacola this past fall.

In Florida, local governments in the coastal counties initiate reef development and act as both project managers and permit holders. Although a county usually must spend funds to acquire artificial reef structures, most petroleum platforms are donated cost-free. Companies will also often pay for relocating a structure -- Chevron recently covered an estimated \$168,000 to transport a jacket from Louisiana to Florida waters.

And relocating a 625-ton platform is no easy task. According to Celestino Gomes, a Facilities Engineer at Chevron, it took a 20-hour barge ride to move the structure from Louisiana to its new site. Once there, workers spent 13 hours using special equipment to lift and properly set both sections on the seafloor.

But that was nothing compared to the relocation of 912 tons of Tenneco platforms from Louisiana to the Atlantic Ocean, just 1.5 miles off the east coast of Florida. The artificial reef, bordering on both Broward and Dade Counties, is the largest of its kind placed on the East Coast.

The Tenneco reef was donated in 1985 through a joint effort with Tenneco, the State of Florida, and the two counties. On the 2-square-mile site rest two complete platforms -- jackets and decks -- and a deck of a third platform. The five sections provide more than 100,000 feet of surface area to the underwater communities.

"This is probably the most spectacular reef I've seen in terms of development," said Dade County Artificial Reef Program Coordinator Ben Mostkoff. "The encrusting organisms really

transform the steel into a living reef -- completely encapsulating it with marine life."

Fishery enhancement also benefits the coastal communities economically. Both commercial and recreational fishing, and recreational scuba diving have prospered from Rigs-to-Reefs projects, which in turn increase local tourism.

"The Tenneco platform is probably our best and most popular dive site," said Mitchell Swaggs, co-owner of H2O Scuba on North Miami Beach. "More so than any other artificial reef, the platform has an incredible abundance of growth."

Ready for similar benefits, Okaloosa and Bay Counties are hoping to add even more platforms to Florida's Gulf of Mexico waters. In fact, Okaloosa County already has the location picked out and waiting. At 27.5 miles from the coast and in 354 feet of water, the county has reserved this site for a Rigs-to-Reefs project for many years.

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## TEXAS' HISTORY OF RIGS TO REEFS

The first planned Rigs-to-Reefs conversion took place in 1979 with the relocation of an Exxon experimental subsea template from offshore Louisiana to a permitted artificial-reef site off Florida.

To date, around 60 petroleum structures have been converted to permanent reefs in the Gulf of Mexico. An estimated 18 platforms have been donated to the State of Texas on behalf of fishery enhancement, with a 19th conversion -- a Mobil rig slated for early this summer.

"The recycling of obsolete petroleum platforms is the heart of our artificial reef program," said Texas program coordinator Hal Osburn. "One of our goals right now is improving non-consumptive sites -- in other words, emphasizing diving sites. So we're focusing on sites close to shore with high-profile structure, such as petroleum platforms."

The upcoming Mobil conversion will be just that -- a premier Texas diving site. Transported from off the coast of Port Mansfield to just seven miles off South Padre Island, the structure will reach to just 30 feet below the water's surface -- making it ideal for diving.

But even before planned Rigs-to-Reefs conversions, Texas fishermen benefitted from the increased biological activity associated with active petroleum platforms. Many of those working rigs throughout the Gulf of Mexico, however, will soon deplete their resources and be removed. At the rate of more than 100 platforms being removed a year gulf-wide, it is estimated that 40 percent of the remaining structures could be obsolete by the year 2000. Such a loss overall could represent a major impact on Texas fishermen and divers as well as local tourism.

For that reason, Texas must continue to offset a potential loss of habitat by creating permanent artificial reefs.

Because active rigs are de facto artificial reefs, we must work to acquire obsolete platforms and preserve the habitat already created, rather than just scrapping it all, said Osburn.

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#### ALABAMA'S HISTORY OF RIGS TO REEFS

The first planned Rigs-to-Reefs conversion took place in 1979 with the relocation of an Exxon experimental subsea template from offshore Louisiana to a permitted artificial-reef site off Florida.

To date, around 60 petroleum structures have been converted to permanent reefs in the Gulf of Mexico. Two platforms have been donated to the state of Alabama on behalf of fishery enhancement, with a third conversion -- a UNOCAL jacket -- slated for mid-summer, according to Walter Tatum, Alabama Artificial Reef Program Coordinator and Chief Marine Biologist.

Fishery enhancement benefits the coastal communities economically. Commercial and recreational fishing have prospered from Rigs-to-Reefs projects, which in turn increase local tourism. The Marathon platform sections placed 60 miles offshore in 1983 are still visited by fishermen on a regular basis and provide excellent fishing.

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#### LOUISIANA'S HISTORY OF RIGS TO REEFS

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with the relocation of an Exxon experimental subsea template from offshore Louisiana to a permitted artificial-reef site off Florida.

To date, around 60 petroleum structures have been converted to permanent reefs in the Gulf of Mexico. An estimated 36 platforms have been donated to the State of Louisiana on behalf of fishery enhancement.

But even before planned Rigs-to-Reefs conversions, Louisiana's fishermen benefitted from the increased biological activity associated with active petroleum platforms. Today, with 3,800 rigs throughout the Gulf of Mexico, rigs account for about 90 percent of all the hard-bottom habitat in Louisiana state waters less than 300 feet deep. In fact, about 75 percent of Louisiana's recreational fishing trips are destined for at least one rig.

Recreational fishing is in jeopardy, however, since many of the gas and oil structures in the Gulf will soon deplete their resources and be removed. At the rate of more than 100 platforms being removed a year gulf-wide, it is estimated that 40 percent of the remaining structures could be obsolete by the year 2000. Such a loss overall could represent a major impact on Louisiana fishermen as well as local tourism.

The recycling of obsolete petroleum platforms "is not just a matter of `converting,' it is maintaining the habitat that has already been created," said Louisiana Artificial Reef Program Coordinator Rick Kasprzak.

"Economically, offshore platforms are the heart and soul of our recreational fishing industry. But they're not permanent -- they're being removed in high numbers. We have to work to maintain as many as we can," said Kasprzak.

-MMS-

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