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"Coral Communities Associated with Drilling Platforms"
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Admiral Watkins, Dr. Kitzos, and Commissioners,

Thank you very much for the opportunity to speak to you today. I consider it an honor.

My name is Paul Sammarco, and I am a Professor at the Louisiana Universities Marine Consortium (LUMCON), in Cocodrie, LA. This talk dove-tails with that of Mr. Steve Kolian, who spoke this morning on drilling platforms.

The purpose of this presentation is to orient the Commission with respect to recent findings on the development of coral communities on offshore drilling platforms in the northern Gulf of Mexico. I also wish to identify the implications of those findings for federal legislation regulating the restriction of coral from harvest and take, and also for legislation regulating the decommissioning of platforms. These two pieces of legislation may need to be reviewed in light of these findings. I see these developments as positive for industry, the environment, and the regulating agencies. I have submitted three (3) CD-Roms with a PowerPoint presentation to your Secretary. These are for your viewing, at your leisure.

I have been conducting this study with Ms. Amy Atchison (graduate student, Louisiana State University) and Mr. Greg Boland (Environmental Section, US Department of the Interior - Minerals Management Service, New Orleans). The study is entitled "Drilling Platforms as Environmental Assets: Developing an Assessment Protocol using Adult and Juvenile Corals."

There are tens of thousands of platforms which have been deployed in the northern Gulf of Mexico since the 1940s. There are currently ~4,000 deployed. This region of the Gulf has not possessed hard-substratum in shallow water, certainly not at its present sea level, for many thousands of years. The platforms have provided this. Prior to the 1940s, soft bottom substratum dominated the region, extending for hundreds to thousands of kms.

Many marine organisms settle on these platforms, including Caribbean sponges, gorgonians, and demersal fish. Preliminary observations have suggested that platforms are also being colonized by Caribbean corals. Corals are protected in US waters by the Magnuson-Stevens Act, and from international trade by international trade agreements. The observation of their occurrence on platforms is significant because the only major set of coral reefs in the northern Gulf of Mexico are the Flower Garden Banks, a NOAA National Marine Sanctuary, 110 nm S-SW of Galveston, TX. These reefs are now isolated from neighboring reefs by hundreds to thousands of kms - and have been for thousands of years. They are now surrounded by drilling platforms.

We have surveyed 11 drilling platforms covering a ~60 km radius around the Flower Garden Banks. Thus far, we have found 11 spp. of Caribbean corals, which are characteristic of mature coral communities. We are currently assessing recruitment rates, survival rates, and causes of mortality in newly settled juvenile corals.

We found several major relationships, which should be useful to MMS and the oil and gas companies alike. Firstly, coral abundance is strongly, positively correlated with platform age. This is a highly predictable relationship. The same is true for species diversity of corals.

The presence of these new coral communities has most likely increased the stability of coral populations in the northern Gulf of Mexico. Previously, the Flower Garden Banks were highly isolated from neighboring coral populations. A major perturbation could result in mass mortality, requiring long periods of time for recovery. Now, the platform communities may act as potential sources of larvae for recolonization. The platforms may actually be playing a positive role for the environment through the presence of their coral populations, and this should be taken into consideration at the time when decommissioning is required.

There are currently 3 options available for decommissioning platforms:

. removal (required by federal law);
. cutting and toppling (permitted under the “Rigs to Reefs” program); and
. leaving in place.

The Magnuson-Stevens Fisheries Management Act of 1975 was amended on Oct. 11, 1996 to, among other things, protect corals as no-harvest, no-take organisms. Other federal legislation exists to regulate the decommissioning of platforms. These two pieces of legislation may need to be reviewed in concert and brought into alignment, in order to enhance the protection of coral communities currently developing in the Gulf of Mexico. In my opinion, such a review could impact

. industry positively through decommissioning cost-savings, and expansion of other industries into the region,
. the environment positively through enhanced environmental protection, and
. government positively by bringing into alignment several important pieces of relevant legislation.

This area clearly needs additional research funding at a number of levels. For example, the potential related functions for post-production platforms include –

. Fish mariculture, impacting fisheries
. Coral mariculture, impacting the aquarium supply industry
. Recreational diving, impacting tourism, the charter boat industry, and the diving industry
. Navigation
. Recreational fishing
. Resort development, impacting the tourism industry, and
. Homeland security.

(I believe that issues regarding the last point should be discussed in another forum, preferably in closed session.)