

Coral Reefs in Potential Conflict with Oil and Gas Development

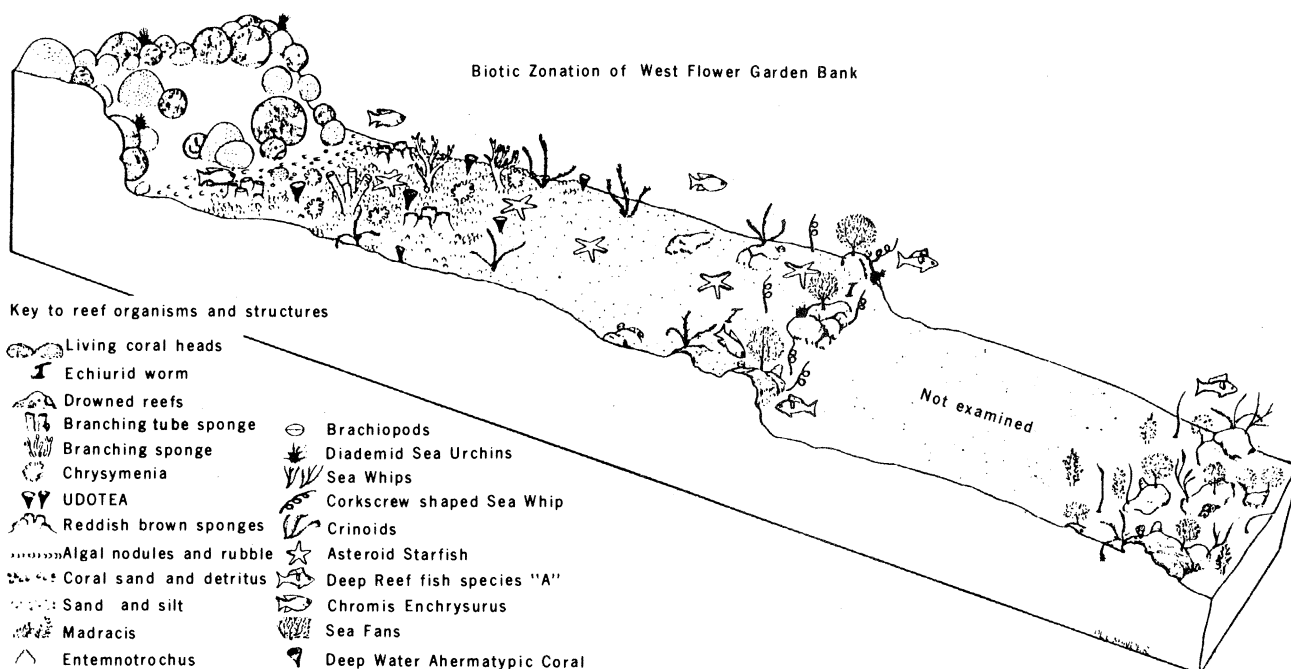
The Flower Garden Banks are two coral reefs in the Gulf of Mexico, about 120 nautical miles south of the Texas-Louisiana border, in an area heavily peppered with tracts leased for gas and oil exploration.

The two reefs, covering an area of about 10 square miles, have not been much affected by human activities; now there is concern that sediment from drilling operations may cause irreparable and unforeseen damage to delicate coral ecosystems.

The Department of the Interior's Bureau of Land Management has already prohibited drilling in the area directly

strict than the limits originally recommended by EPA and reflect the fact that scientists are divided over the potential threat drilling operations pose for the reefs.

Coral reefs are extremely complex ecosystems, according to one EPA official, ranking with tropical rain forests and seabed benthic communities. The Flower Garden reefs are particularly vulnerable because they are the northernmost living coral reefs on the U.S. intercontinental shelf and thus especially susceptible to any environmental change. A light increase in sedimentation could weaken the corals' ability to cleanse themselves and discourage larvae



around the reefs. Now the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) has proposed that a 175-mile-square area encompassing the two reefs be declared a marine sanctuary. A draft environmental impact statement for that purpose is currently being circulated.

The sanctuary, in addition to a no-activity zone over the reefs, would cover an area 4 nautical miles around the reefs' 100-meter isobath. In this region drilling operations would be tightly regulated; used drilling muds and cuttings would have to be shunted close to the sea bottom, bulk discharges would be prohibited, and various additional monitoring procedures would have to be followed. The impact statement estimates that, at the very maximum, the provisions would add up to \$500,000 per well to drilling costs. (A platform costs about \$20 million to construct and may be the base for about 20 wells.)

The statement also calls for a 5-year moratorium on further leasing within the sanctuary pending further study of the effects of operations on the reefs.

NOAA and the Environmental Protection Agency (EPA) worked on the sanctuary provisions together. They are less

from settling there—in which case they would have nowhere else to go, because these are the only tropical reefs in the northwestern part of the Gulf. Reefs themselves are very slow-growing—it takes several hundred years to build up a good-sized coral head—and corals are very slow at adapting to change.

Although several studies have indicated that the reefs would not be affected by drilling operations, many scientists believe there simply is not enough available knowledge about their ecology to predict long-term effects. Also, according to a spokesperson for Defenders of Wildlife, which has taken an interest in the proposed sanctuary, "most studies appear to have been done" by consultants employed by oil and gas companies and few have found their way into the refereed scientific literature.

The proposed East and West Flower Gardens Marine Sanctuary would be the third designated by NOAA's Marine Sanctuary Program. The other two, designated in 1975, are a reef in Key Largo and the site of the U.S.S. *Monitor* wreck off Cape Hatteras. The program was established in 1972 but did not receive its first authorization—of \$0.5 million—until this year.—C.H.