Our Ocean Backyard — *Santa Cruz Sentinel* columns by Gary Griggs, Director, Institute of Marine Sciences, UC Santa Cruz.

#54 May 8, 2010
A drilling disaster

Offshore drilling platforms can cost up to $500 million.

Unfortunately, there is absolutely nothing positive to say about the recent explosion and well blowout in the Gulf of Mexico. It's a tragedy for everyone and everything involved. The waste of oil, the loss of human life, and the impacts of the oil on the ocean and coastal environments will be with us for months and probably years. As I write this, most of the news coverage has been focused on how much oil is getting into the ocean (best guess so far being about 210,000 gallons per day or 3.8 million gallons), the failure of each of the methods used to retain or capture the oil, speculation about how long and what it might take to seal off the well or somehow reduce the release of oil, and the concern for the biological losses expected along the Gulf Coast and beyond.

The 1989 Exxon Valdez spill released 11 million gallons of oil but the remainder of the cargo was contained in a tanker floating at the surface under relatively calm conditions. In the case of the British Petroleum's Deepwater Horizon drilling platform, the oil is being released from a pipe broken in three places on the seafloor at a water depth of 5000 feet that is 40 miles offshore. The broken pipe penetrates a oil reservoir under high pressure containing an undisclosed amount of oil, but certainly millions of barrels. In all likelihood, this will be the worst oil spill in U.S. history.

The first column I wrote two years ago explained how petroleum forms in the ocean. Several months later I talked about our use of oil and where it comes from. As a quick summary, while the U.S. has 4.5% of the world's population, we use 25% of the oil, about 21 million barrels every day. We have been importing about 2/3 of that or 12 million barrels a day. At this week's price of $80/barrel, the USA is spending about a billion dollars a day, buying oil from foreign countries. We are fortunate to have two next-door neighbors, Canada and Mexico, who we can count for about a third of our imports. But much of the rest comes from places like Algeria, Angola, Nigeria, Kuwait, Saudi Arabia, Iraq, Venezuela and Russia. So we are spending over a billion dollars a day importing oil, with much of the money going to countries whose interests don't necessarily align with ours.

So "drill, baby, drill" is one of the ways that has been proposed to help alleviate this situation. One major limitation I described a year and a half ago was the shortage of offshore drilling platforms and an industry executive wrote then to let me know that if you placed an order for a drilling vessel, it would take 8 years and a $4 million nonrefundable deposit, on a $200-$500 million investment. This is probably one reason why BP is saying today it might be at least three months until they can get a drilling rig on the site with the hope of drilling to reduce reservoir pressure. One thing that does seem clear is that there wasn't a plan in place to deal with a blowout in 5000 feet of water.