

# Relief drilling to take time to stop oil gush

**It could be summer before oil gushing from the broken oil well is stopped**



The arm of a robot submarine is shown attempting to activate a shutoff device known as a blowout preventer (BOP) to close off the flow of oil at the Deepwater Horizon well head.

US Coast Guard / AP Photo

**By Larry O'Hanlon**

[DiscoveryNews](#)

updated 10:30am May 3, 2010

Drilling will soon begin on the first relief well to plug the broken Deep Horizons oil well. But despite the rapid mobilization of drill rigs, taking that approach means it could be summer before the flow of oil gushing from the well in the Gulf of Mexico is stopped.

"We continue to keep up efforts to stop the source of the flow," said British Petroleum's COO Doug Suttles, speaking at a press conference on Friday. .

That flow is estimated at anywhere from 5,000 to 25,000 barrels per day based on [satellite](#) imagery, as well as BP's deep sea rovers that can see the oil pouring out of the well. But it's not possible to accurately meter the flow, so it's impossible to be certain, said Suttles.

Even the lower ranges amount to a great deal of oil that's not likely to stop flowing any [time](#) soon. Not hours, not days, not even weeks, said Jerry Milgram, a professor of marine technology at MIT and one of the most respected ocean engineers in the world. .

Milgram has decades of experience with oil spills and helped to develop some of the technology now being employed to control the Deep Horizons oil spill.

"It's going to take months to do something about it," said Milgram, who is not involved in the Deep Horizon's relief well efforts, but worked on similar large wellhead leaks in Mexican waters in the 1970s.

The reason it takes so long has a lot to do with exactly how these wells are supposed to do the job.

### **Relief wells explained**

The goal of a relief well, Milgram explained, is first to drill down to the same oil-bearing rock from which the leaking well is getting its oil. "The oil is under pressure," said Milgram. "So you can't get too near the original hole with the drill rig."

Once the rig is in location, the long, difficult process of drilling can begin.

"In this case it's kind of hard," said Milgram. "You are drilling through mostly rock. It's not going to be fast."

When the same oil-bearing rock is eventually reached by the relief well drill rig, the sealing of the broken well can finally begin.

First, seawater is pumped into the rock through the relief well. If all goes according to plan, that water should make its way into the lower end of the leaking well, displacing oil. If that **succeeds**, the next step is to pump in a mineral mud, which follows the sea water up the broken well. Once that mud fills the well, concrete can be pumped into the relief well.

"If you get a tall tower of mud, and if you're lucky, you'll stop it," said Milgram. "The next day you pump concrete and then the well is dead."

The mud and concrete work by their by density and shear weight, which is enough to counter the highly pressurized oil moving up the well.

### **Oil control**

Until that happens, there could be a lot of oil pouring into the ocean for some time.

As for what's happening on the surface to control the already leaked oil, Milgram is skeptical and says many techniques don't have very good track records. Burning oil on the water surface, for instance, does very little, he said, and is more of a public relations stunt than an effective way to reduce the oil.

And those those miles and miles of booms floating in the water to control the spill? They are only temporary help unless there are skimmers gathering all that oil up. Otherwise the oil will certainly escape and spread, Milgram said.

The situation is not hopeless, however, and there are things that will do some good.

"The relief well is going to accomplish good," Milgram said. "Manually cleaning beaches will do good and dispersants for shell fish beds might work."