



BP's Deepwater Oil Spill - Rig Workers had Chance to Prevent Explosion? - and Open Thread

Posted by [Gail the Actuary](#) on September 11, 2010 - 10:50am

Topic: [Economics/Finance](#)

Tags: [deepwater horizon](#), [oil spill](#) [[list all tags](#)]

BP's [new report](#) giving their version of what happened at the time of the explosion comes to a rather surprising conclusion--that the blowout preventer worked, but too late. If the rig crew had taken different actions, the explosion and fire might have been prevented. According to a Wall Street Journal article titled [Rig Workers Had Chance to Prevent Explosion](#):

Contrary to what most oil industry experts thought based on testimony in government hearings, not only did the crew manage to activate the blowout preventer—the huge set of valves designed to shut off the flow of gas in an emergency—but the preventer worked. Unfortunately, workers only triggered it after gas had blown past its valves.

Then, as the gas already in the pipe raced upward toward them, workers decided to divert the flow through a system aboard the rig, rather than over the side, giving the gas a chance to envelop the rig and ignite.

If workers had either realized the problem with the incoming gas moments sooner or steered the flow of the gas differently, the gas might never have reached the rig floor, the report finds.

Of course, this is BP's interpretation. Others, when analyzing what happened may very well come to different conclusions. With the blowout preventer now available for examination, this may shed further light on the situation.

According to the WSJ:

At 9:41 p.m., the report says, heavy drilling mud shot out the top of the well, apparently the first time the crew realized they were in serious trouble. Workers quickly triggered a part of the blowout preventer that seals off the well with a rubber valve. The valve closed, but didn't fully seal, allowing some gas to squeeze through, the report says.

By this point, even if the valve had sealed, gas had already risen past the blowout preventer and was racing up the mile-long pipe leading from the well on the sea floor to the rig floating at the surface, the report said.

At 9:47 p.m., the blowout preventer did finally stop the flow of gas, either because

workers clamped down tighter on the rubber seal or because they deployed a different, tougher valve, the report says. But at the same moment, alarms on the rig began to blare, indicating that gas had reached the surface.

Still, with the well at least temporarily sealed, workers had a finite amount of gas to control. If they could get rid of the gas without it catching fire, the flow would stop and there would be time to find a more permanent solution.

There is some corroboration with this version of the story in that some witnesses say the mud suddenly stopped shooting up.

The question BP raises is whether there would have been a way of preventing the explosion at that time, by dumping the mud and gas overboard, instead of following the required procedure. According to the WSJ,

Workers had made another fateful decision in the first moments of the blowout: They had directed the gas and drilling fluid coming out of the well through a system on board the rig rather than straight overboard. Normally, that would have been the right decision. Dumping oil-based fluid overboard is a violation of federal law and could have drawn a substantial fine. The system on the rig was designed to capture the fluid and get rid of the gas.

But in this case, the sheer volume of gas overwhelmed the system.

At 9:49am, there was a huge explosion, and nothing more could be done. According to the BP version of the story, the temporary valve that the workers managed to close later worked loose, starting the flow of oil into the Gulf of Mexico.



This work is licensed under a [Creative Commons Attribution-Share Alike 3.0 United States License](https://creativecommons.org/licenses/by-sa/3.0/).