

Deepwater Horizon SketchUp Model Notes

These are notes for the SketchUp model. SketchUp is a 3D modeling application from Google. If you don't have SketchUp, the free download from Google is available [here](#).

Click on each scene button at the top of the file's window and the viewing position will change. You can also use the *Move*, *Orbit*, and *Zoom* tools to change the view. Although I'm not an expert, [this source](#) was helpful in gaining understanding on how offshore drilling is done. These are notes for each scene.

Scene 1: Deepwater Horizon offshore drilling platform is located in the Gulf of Mexico 41 miles off the coast of Louisiana. The rig is owned by Transocean, the world's largest offshore drilling contractor, and was being leased to oil company British Petroleum (BP) for the purpose of oil exploration.

Scene 2: Deepwater Horizon is semi-submersible mobile offshore drilling unit (MODU) with a crew of 126 people. It sits on two large pontoons and is kept in position by propellers and thrusters. It could operate in waters up to 8,000 feet deep.

Scene 3: April 20, 2010: The rig is cementing pipe casings. Deepwater Horizon would eventually cap the well and another platform would arrive in the future for production.

Scene 4: 4,992 feet below is the wellhead and the blowout preventer (BOP). The BOP is a large safety valve that controls the enormous pressure in the piping from underground oil or gas.

Scene 5: The "piping" is actually one 22" casing inside a 36" casing. The innermost casing (represented in orange) contains the drill bit and drilling fluid or "mud". Used drilling fluid and rock cuttings are carried up to the rig in the outer casing (represented in yellow).

Scene 6: As the drill bores deeper, sections of the two casings are cemented in place.

Scene 7: A blowout occurs at 9:45 PM CST. Methane gas shoots up the piping and the BOP fails.

Scene 8: Methane gas shoots to the surface and ignites on the platform. 11 workers are lost and presumed dead. Deepwater Horizon sinks 36 hours later.