



**U.S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region**

Safety Alert No. 213
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Marine Riser Failure

While drilling in approximately 6,000 feet of water, a drillship recently experienced a catastrophic failure of the marine riser. The drillship was equipped with a dual derrick, and dual activity was being conducted at the time of the incident. On the forward rotary, where the marine riser was installed, the rig crew was in the process of pulling out of the hole from total depth. On the aft rotary, the rig crew was in the process of running 20-inch casing for an adjacent well. The failure of the flanged marine riser occurred when drillpipe had been pulled a couple hundred feet off-bottom. At that time, the rig experienced a heave motion followed by a strong jarring action. The ROV, which had been launched to observe the running of the 20-inch casing, was dispatched to examine the marine riser.

When the ROV reached approximately 3,200 feet of water, it was determined that the riser had separated between riser joint 39 and 40 and was unloading the synthetic-based mud that was in use at the time. The drillpipe was observed to be intact at this depth. As the ROV traced the drillpipe deeper, it was found penetrating the lower section of buoyant riser that was free-standing from the seafloor to approximately 1000 feet from the mudline. The remainder of the riser was found scattered on the seafloor surrounding the wellhead and BOP stack.

As the ROV scanned the BOP stack, it was determined that the riser was cleanly parted about one foot above the lower marine riser package. There was no flow observed from the well. When the riser parted, the "dead man" system activated, and all fail safe valves, casing shear rams, and lower blind shear rams were closed. The drillpipe was successfully sheared by this activation. At a later point, the ROV used a hot stab to activate a second set of upper blind shear rams to provide another barrier on the wellbore. Although the well control equipment functioned as designed, the parting of the marine riser resulted in a release of an undetermined amount of synthetic based mud.

The subject accident is currently under investigation by MMS. Upon its completion, the investigation report, as well as a possible follow-up Safety Alert, will be made available to the public. Your attention is directed to our conditions of approval for Applications for Permit to Drill involving the use of subsea BOP stacks. The approval outlines our requirements for the shut-in capability of the well in the event of an unplanned disconnect of the lower marine riser package or the parting of the marine riser. It should be noted again that, in this incident, the "deadman" system functioned properly and prevented the release of well bore fluids into the water column.

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