

Safety Alert

MMS

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

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Unplanned Riser Disconnect Results in Spill

An unplanned disconnect of the Lower Marine Riser Package from the subsea blowout preventer equipment was recently initiated on a semi-submersible rig engaged in exploratory activities, during a time of shifting loop currents coupled with quickly deteriorating met-ocean conditions from tropical storm developments, the total of which pushed the rig's DP system capability to the limits, leading to an unacceptable loss of rig position.

While the riser volume was being displaced with seawater in preparation for the disconnect operation, the rig was no longer able to maintain station. As a result, the riser was disconnected from the Lower Marine Riser Package, and 710 barrels of synthetic mud was released into the Gulf of Mexico.

An MMS investigation concluded in part that the inability of the rig to maintain station adequately, resulting in the subsequent release of synthetic mud into the Gulf, was primarily the result of inappropriate DP rig selection for the environment in which it was to operate. Procedures onboard the vessel at the time of this incident did not adequately take into account the proper watch areas and appropriate T-times for certain action items to be taken during deteriorating sea conditions. These procedures were revised after the incident to reflect loop currents and associated eddies in the Gulf of Mexico better.

To ensure that industry adopts similar best practices, the following are recommended with respect to *dynamically positioned drilling rigs*:

- 1) Lessees and operators should review the adequacy of their policies/plan regarding planned and unplanned riser disconnects.
- 2) Riser disconnect policies/plans should address at a minimum the following:
 - a. A site-specific riser disconnect /policy plan per location as a complement to a general plan.
 - b. The obtaining of site-specific environmental/oceanographic data for the purpose of position holding and riser angle minimization considerations.
 - c. The criteria for the initiation of riser disconnect operations as a function of impending tropical storm conditions.
 - d. The routine review of T-time estimates during storm seasons.

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A complete account of the accident is available on the MMS website at http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/accindex.html