MMS Safety Alert

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

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Rig Collapse with Fatalities and Injuries

During the final stages of rigging-up operations, a platform rig collapsed, resulting in 3 fatalities and 13 injuries. The rig, which consisted of an upper, intermediate, and lower substructure, was aligned transversely to the platform's skidding beams and supported by shimming, support, and false capping beams. The aforementioned supporting beams did not extend to the end of the lower and intermediate substructures. As the upper substructure was skidded, in preparation for the derrick positioning and raising, to within a foot of its targeted position, the underlying substructures tilted and slid to the side to which the skidding was directed. As a result of that movement, the upper substructure and other rig components fell into the Gulf, 3 employees fell to their deaths, and 13 employees were injured.

During the skidding operation, the upper substructure had reached a point where its center of gravity had moved sufficiently past the last support beam so that the moment of the weight of the upper substructure acting through its center of gravity about the last support beam was greater than the summation of the countering moments of the weights of the intermediate and lower substructures about the same support beam. This imbalance physically caused the substructures to move as described above. Other causes are listed in the MMS report on this accident.

Therefore, from this information and information contained in the referenced MMS report, the following are recommended for those cases where a drilling rig is not using the platform's skidding beams in a traditional manner and also in which rig substructures are used with a platform/substructure support beam interface:

a. The drilling contractor develop an official written procedural guideline that details all engineering-related aspects of the installation of the rig,
b. The operator be familiar with the procedural guideline and have onsite during installation a representative to ensure compliance with the guideline, and
c. The operator and contractor in conjunction hire an independent consultant to verify the correctness and sufficiency of all engineering analyses related to the installation of the rig.

For details of the accident, see OCS Report MMS 99-0027. Copies of the report may be obtained from the MMS Public Information Office located at 1201 Elmwood Park Boulevard, New Orleans, Louisiana 70123 (1-800-200-GULF or local 504-736-2519).

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MMS Internet Homepage: http://www.gomr.mms.gov