

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

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Drilling Accident Results in One Fatality

A fatal accident occurred during reaming operations on an offshore rig as a driller was in the process of breaking out a portable top drive from drill pipe at the rig floor. The spring loaded/hydraulically released pin (hydraulic pin) which, when engaged, prevents the entire pipehandler assembly from rotating during break-out or make-up activities, was not engaged. After having set the speed and rotation controls and after having activated the torque arrestors, the driller began to increase torque. As torque was increased, the elevator links, which were tilted out as a result of the position of the top drive unit, began to rotate counterclockwise. The driller, in attempting to stop the rotation of the elevator links, overcompensated by turning the rotation control knob past the neutral setting to the clockwise position. As a result, the elevator links and attached elevator reversed direction, struck the driller, and fatally pinned the driller as well as the drilling console against the draw works.

Therefore, from this information, it is clear that caution must be exercised when operators use the type of top drive for which it is possible for the elevator links to rotate when the torque arrestors are activated and the top drive shaft is being made up to or broken out of the drill pipe. Specific recommendations are as follows:

1. Operations personnel be made aware of the ability of elevator links to rotate when the torque arrestor is activated and torque is applied.

2. A safety procedure for stopping the rotation of tilted elevator links, should such a rotation be undesirable and/or unintentional, be incorporated into a prescribed operational procedures statement and be made incumbent upon operations personnel.

3. Every practical precaution be taken to shield the drilling control panel from tilted rotating elevator links.

4. Consideration be given to the incorporation of an indicator into the driller's control panel that would conspicuously signal the disengagement of the hydraulic pin or, in general, the ability of the elevator links to rotate should torque be applied.

For details of the accident, see OCS Report MMS 97-0034. Copies of the report may be obtained from the MMS Public Information Office located at 1201 Elmwood Park Blouevard, 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