



Safety Alert

From the International Association of Drilling Contractors

ALERT 00-07

RIG DAMAGED BY DRILL COLLAR RELEASE FROM FINGERBOARD

WHAT HAPPENED:

Two 120' (36m) stands of 8-1/4" (20.6 cm) Range II drill collars were released from the fingerboard. The two stands struck beams on the opposite side of the derrick and broke in half at the middle connections. One of the upper 60' (18m) doubles penetrated the driller's cabin. Fortunately, there were no injuries, but the rig incurred downtime in addition to property damage.

WHAT CAUSED IT:

A specific operational sequence involving multiple pipe racking systems and a common fingerboard resulted in a loss of fingerboard latch control ability due to incorrect software control logic. When the command to close the latch was given for a stand moved to the fingerboard by a pipe racking system, the latch for the slot position behind the stand opened. Troubleshooting this control problem in the adjacent fingerboard slot resulted in unlatching two stands drill collars, which fell across the derrick before the latches could be closed or the stands could be tied off. The possible ramifications of troubleshooting fingerboard control problems with pipe in the fingerboard, were apparently not taken into account.

CORRECTIVE ACTIONS:

1. Modify software control logic to correctly address multiple pipes racking system-operating condition.
2. Add software control logic to require a pipe racking system to be in front of slot with arm extended to prevent stand from falling before allowing latch to open.
3. Add kill and dump valves to air supply for fingerboard latches. Operation of these valves should be independent of the software control system to provide a method of quickly closing all fingerboard latches, which are air-open and spring-close.
4. Ensure adequate visual observation capability of fingerboard latches.
5. Plan troubleshooting procedures considering and effectively accounting for possible ramifications or additional hazards.

The Corrective Actions stated in this alert are one company's attempts to address the incident, and do not necessarily reflect the position of IADC or the IADC HSE Committee.

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