Safety Alert

From the International Association of Drilling Contractors

ALERT 07 – 02

DRILLING WITH AIR, AERATED MUD OR FOAM

WHAT HAPPENED:

The rig was drilling with foam and compressed air was being injected at the standpipe manifold at approximately 800psi. After drilling the Kelly down, the driller contacted the third party air drilling vendor to initiate the connection process. The third party service hand diverted the air to the blow-down line but did not close the supply valve to the standpipe manifold. The driller pumped the required fluid volume to displace the pipe with fluid to the BHA check valve. The lower Kelly valve (LKV) was closed and the connection broken off in the rotary table. The Kelly was made-up to the mouse hole joint and the rig crewmember opened the LKV. Compressed air trapped inside the Kelly blew down through the mouse hole joint and came out through the top of the mouse hole. The crewmember was startled by the incident and slipped while moving away from the mouse hole, injuring his shoulder and arm.

WHAT CAUSED IT:

The connection procedure was not followed correctly. The procedure called for the compressed air to be bypassed through a bypass line and the supply valve to be closed. The supply valve was left in the open position and backpressure from the bypass line forced air into the Kelly.

Underlying Causes:

The communication between the drilling contractor and third party air vendor was not sufficient. The JSA was verbal and no written procedures for bleeding down the system and checking for trapped pressure were in place.

CORRECTIVE ACTIONS: To address this incident, this company did the following:

- Written procedures for making connections and tripping have been developed and posted at the driller's station.
- An independent bleed off valve/line at the standpipe manifold will be installed and procedures shall mandate this valve be opened prior to breaking the Kelly connection.
- No rig shall begin air/foam drilling operations until the Operations Manager has reviewed and approved the specific rig up and operating procedures.

IADC Note: See IADC HSE Reference Guide Section 18

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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