



# Safety Alert

From the International Association of Drilling Contractors

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ALERT 10 – 02

## MUD PUMP PISTON CHANGE-OUT RESULTS IN RWC

### WHAT HAPPENED:

The rig crew was attempting to repair the mud pump and at the time of the incident, the crew began to remove the piston from the mud pump liner. In order to remove the piston, the Derrickman (injured person) was using a sledgehammer.

While swinging the sledge hammer, the injured employee missed the piston and his left middle finger was caught between the mud pump liner and the sledge hammer handle. The injured employee sustained a fracture to the finger and lacerations to the top and bottom side of the finger.

### WHAT CAUSED IT:

- Personnel failed to recognize potential hazard for injury while working in confined area and surroundings.
- Personnel failed to use correct hand tools. An improper steel handled sledge hammer was in use which compounded the injuries sustained.
- Lack of planning or HSE focus. The crew failed to conduct pre job safety meeting; they did not plan and utilize a Permit to Work (PTW) system; no JSA was utilized.
- Supervision at time of incident was lacking due to Senior Site Rig Manager being off location attending monthly safety meeting at the client's production facility. Also the line supervisor was not present at the time of the incident.

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

- Instructed rig personnel to remove improper tools from work site area.
- Employees were given training and awareness towards correct choice and use of tools.
- Rig supervisors were instructed to introduce piston removal tool for maintenance purpose.
- A review of JSA and procedure for removing Mud Pump Piston from Liner was conducted.
- Instructed rig personnel on the correct use of Permit-to-Work system and how to recognize potential injury to personnel by use of safety and equipment check-off list on the PTW document.
- Senior rig site personnel were instructed to communicate the responsibilities and duties of fellow supervisors who will supervise the task when ever senior site manager is off location so the operation can be safely carried out and supervised.
- Rig personnel were instructed to review the following company procedures from company HSE manual:
  - Job Safety Analysis
  - Permit to Work System
  - Crew Safety Meetings
  - Hand Tools
  - Mud Pumps: Installation of Rods and Pistons

**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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