



# Safety Alert

From the International Association of Drilling Contractors

---

ALERT 01 – 45

## BOP CONTROL SYSTEM UNCONTROLLED PRESSURE RELEASE CAUSES LTI

### WHAT HAPPENED:

Relief Rig Manager, Driller and Floorman were removing a Nitrogen accumulator bottle from the manifold bank of 12 bottles. The men were using a chain tong to unscrew and remove the bottle when the bottle blew off the manifold. As the bottle blew upward, the chain tong apparently struck the Driller in the face and head causing severe injuries. The bottle then fell onto the Driller as he was lying on the floor.

### WHAT CAUSED IT:

The pressure had not been bled off the bank of Nitrogen bottles. The accumulator bottles had approximately 2800-3000 psi pressure while the bottle was being removed. In addition, contributing causes were:

- Inadequate pre-operation safety meeting – Relief Rig Manager and Driller were on the rig only a few days and unfamiliar with this closing system. Floorman has been on the rig only five months and had never performed this task before.
- There was no Job Safety Analysis or Plan-of-Action completed or reviewed prior to starting the task.
- There was no written procedure or best practice – Manufacturer's personnel had no written procedure for performing this task.
- Lack of supervision – The Rig Manager and/or manufacturer's technician (those most familiar with the system) were not present when the task started.
- Judgment factors due to assumptions – All gauges on the unit indicated "0" pressure on the system. Valves on top of the unit were checked and found in the open position. Valves on bottom of bottles were in open position.
- Unsafe practice or procedure – The accumulator system had not been used or charged up on this location, yet there was pressure in the system. The accumulator shut-off valve handle had been previously removed in an attempt to prevent unauthorized closing of the valve. Even though the handle had been removed, the valve was closed before the rig move trapping pressure in the bottles.

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

- Immediate action taken by installing pressure gauges behind all isolation valves and locking open and tagging all shut-off/isolation valves.
- Additional training on the preparation, review and follow through on the Job Hazard Analysis, re-visiting the job steps as the task changes.
- Pre-operational safety meetings to help identify **all** Real and Potential hazards
- Written procedures/practices will be developed for working on the BOP control systems.
- Procedural instructions will be included in the new *Master Driller* Course.
- Signage with basic safety information will be developed and posted at the BOP control systems.
- Qualified personnel will inspect all systems within the Company and recommend system modifications.
- Recommended modifications will be reviewed and changes will be approved as deemed necessary.

Qualified personnel will then make all modifications under the direction of the General Manager of Operations and Engineering.

**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.**

---