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WORKER FATALITY DURING SNUBBING ACTIVITY

This safety alert comes from an incident that resulted in a fatality. It occurred in the United States and, although we have different regulations covering snubbing equipment, we conduct comparable activities in Western Canada. Snubbing units are used for fishing, milling, drilling, side tracking or any task needed to remove bridge plugs, cement or deepen wells while the well remains live.

Snubbing is a high hazard activity and this safety alert is an opportunity to discuss similar hazards in Canadian operations with your workforce.

DESCRIPTION:

A worker was running diagnostics, but the equipment was not locked out. The worker was struck and killed when the equipment fell from a suspended position.



TYPICAL SET-UP OF A WORK PLATFORM ON A SNUBBING RIG. THE WORKER WAS STANDING IN FRONT OF THE CONTROL PANEL WHEN THE INCIDENT OCCURRED.

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CAUSE:

- Controls were not locked out.
- Jack and tubing were not secured by moving into downward position.
- The well was not secured when performing diagnostics.
- No hazard assessment was conducted before performing diagnostics.

CONTRIBUTING FACTORS:

The traveling assembly fell without an energized hydraulic power unit when trapped pressure in the lift pilot line released. The self-contained hydraulic control system—Hydraulic Work Over (HWO) unit ceased keeping pressure against the jack, causing the jack cylinder to drop suddenly.

The company confirmed, through thorough testing, that it was possible for the worker-operated pilot valve to unintentionally move due to the traveling assembly's own weight. In this case, the equipment fell, striking the worker standing beneath it.

CORRECTIVE ACTIONS:

- » The manufacturer installed a counterbalance valve as close to the worker-operated pilot valve as possible to prevent unintentional equipment movement. The counterbalance valve activates even when there is catastrophic hydraulic failure.

ADDITIONAL RESOURCE: [DACC IRP #15 – Snubbing Operations](#)

Lockout Equipment (Section 15.3.1.7)

- A lockout system shall be in place to prevent equipment failure where there is potential for workers to be injured while they are inside the range of motion of that equipment.
- Snubbing unit components that shall have lockouts include, but are not limited to, the following:
 - » Power Tongs
 - » Slip Controls
 - » Snubbing BOP Controls
 - » Jack Control
 - » Annular

Engineering and Design Specifications (Section 15.3.3)

- All snubbing equipment in use must be certified by a certified professional engineer using the appropriate and applicable standards from the following:
 - » American National Standards Institute (ANSI)
 - » American Petroleum Institute (API)
 - » American Society of Mechanical Engineers (ASME)
 - » Canadian Standards Association (CSA)