



Safety Alert

From the International Association of Drilling Contractors

ALERT 01-20

ENERGY FORCES MUST BE TAKEN INTO ACCOUNT

WHAT HAPPENED:

The IADC Accident Statistics Program shows that the majority of incidents that occur in the drilling industry happen because energy forces are not adequately taken into account.

CORRECTIVE ACTIONS:

There are 6 major energy sources we deal with on a day-to-day basis whether we're on the job or off. When the energy sources are uncontrolled, incidents and injuries happen.

The six energy sources are as follows:

- **Motion:** Objects and equipment are moving around us. We are moving. When we encounter a piece of equipment, we can be caught between, caught in, struck by and we can strike against it. Drill pipe being tailed to the rotary has energy of motion and we control that motion of the drill pipe with a tail rope.
- **Chemicals:** A variety of substances can harm the body when we are exposed to inhaling, absorbing and swallowing them. We control the chemical energy by reducing our exposure to chemicals and, when necessary, wearing a respirator, goggles and protective clothing.
- **Gravity:** When something is elevated, such as mast sections, tubulars, or an employee getting down from a pickup bed to the ground, that is stored energy. We control gravity energy by thinking of gravity when we are walking, stepping up or down, climbing, walking on ice, etc. by watching the placement of each step.
- **Pressure:** Energy is stored in processes such as hydraulic lines, steam lines, mud lines, air lines, etc. We control pressure energy by keeping it trapped in the process and not allowing it to escape to the environment. Preventive Maintenance - using the proper hoses and fittings, use of safety cables/whip checks, etc. helps us to control pressure energy such as air in a rig air supply line
- **Heat/Cold:** Hot and cold temperatures that can cause serious burns when in contact with the skin. We control these energy sources by proper clothing, fire prevention and controls, shielding, alarms etc.
- **Electrical:** An energy source used to power equipment. We control this energy source by containing electricity in cable. We always assume the power is on and use lockout procedures to control this energy.

Learn to think in terms of energy sources and controlling the energy. Define the energy sources when preparing to perform a task, i.e., when washing a pickup truck.

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.

This material is presented for information purposes only. Managers & Supervisors should evaluate this information to determine if it can be applied to their own situations and practices.
Copyright © 2001 International Association of Drilling Contractors. All Rights Reserved

Issued June 2001