



# Safety Alert

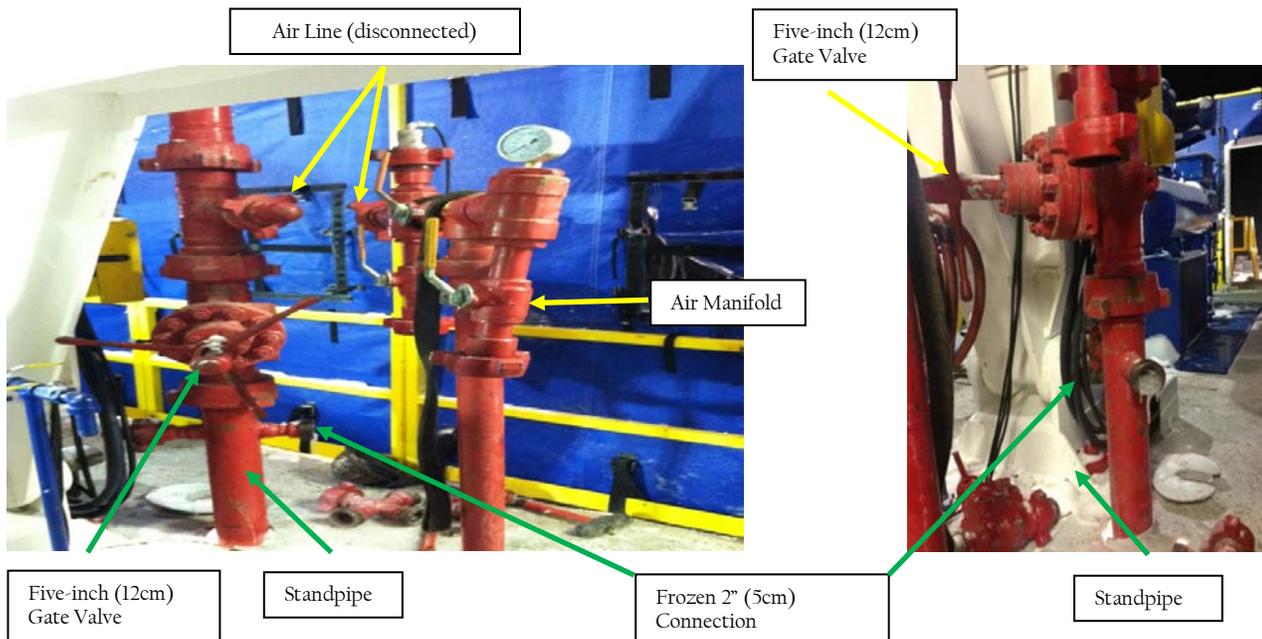
From the International Association of Drilling Contractors

ALERT 13 – 28

## SUDDEN ICE PLUG RELEASE RESULTS IN STRUCK-BY INJURY

### WHAT HAPPENED:

While converting from air to mud, the employee was attempting to reinstall the pressure gauge on the standpipe manifold. When he removed the bull plug from the manifold, he noticed ice had accumulated inside the two-inch (5cm) line. He notified the Driller and then attempted to remove the ice using a hand tool. Trapped pressure existed inside the lower section of the standpipe. As the ice dislodged from the line, it struck the employee in the ribs on the right side, causing internal injuries. He sustained further injuries when he fell back into the handrail striking his shoulder.



### WHAT CAUSED IT:

- Trapped pressure contained in the section of the standpipe below the five-inch (12cm) gate valve was not recognized and released prior to removing the two-inch (5cm) bull plug from the lower section of the standpipe.
- The crew assumed that the standpipe below the five-inch (12cm) gate valve did not have pressure since they were drilling with air, which was supplied and tied in above the five-inch (12cm) gate valve.
- Air pressure was contained in the standpipe below the five-inch (12cm) valve either from a leaking valve or from releasing pressure into the standpipe through the valve to make a connection while air drilling.
- Pressure reading devices (gauge or transducer) had been removed from the lower section of the standpipe for the air drilling.
- The crew did not understand the manifold configuration and did not realize that up-line approval was required in order for changes to be made to the manifold.
- The crew did not expect icing on the inside of the standpipe.

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

- Crewmembers were reminded to discuss the potential for “trapped pressure” and the importance of NEVER ASSUMING that pressure does not exist in a line.
- Employees were reminded to be aware of and to stay out of the potential “line of fire”.
- All crew members were made aware that extra effort must be taken to prevent pressurizing the lower section of the standpipe during air drilling operations.
- Crews were instructed that pressure reading devices are not to be removed from any isolated line unless other measures are taken to verify the presence of trapped pressure.
- Effort shall be made to assist crews, new to a rig/rig type, in order to develop a rig specific JSA (with appropriate detail) to familiarize them with any new aspects of a rig or rig type.

Crewmembers must be reminded of the potential for icing inside of any line and are to discuss (during JSA and periodically during cold weather operations) the hazards and steps to prevent an incident from occurring during any operation requiring separation/disconnection of lines/connections.

**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

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