



# Safety Alert

From the International Association of Drilling Contractors

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ALERT 02 – 20

## CHEMICAL EXPOSURE RESULTS FROM TRAPPED PRESSURE IN MWD TOOL

### WHAT HAPPENED:

While tripping out of the hole and after an aborted attempt to download an MWD tool, two crewmembers were exposed to what is believed to have been acid from a Lithium/Thionyl Chloride Battery. The MWD engineer had opened a download port in the tool (see photo) in order to download tool memory and found it to be slowly leaking drilling fluid. After unsuccessful attempts to reinstall the plug back in the port, the tool was raised 20 feet and a second port was used. While the tool was being downloaded, a "mist/gas" was observed escaping from the original top port. The affected employees were approximately 15 feet from the rotary table and suffered severe vomiting and shortness of breath.

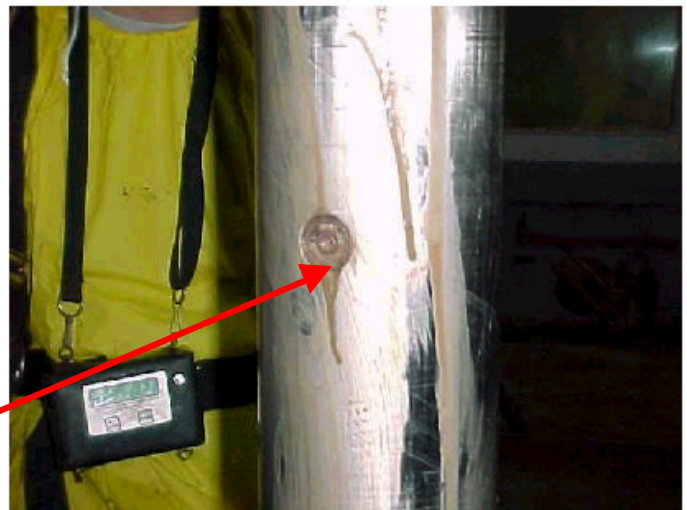
### WHAT CAUSED IT:

A washout in the tool allowed mud invasion into the electronics package and led to battery failure. Downhole pressure and/or pressure from the reaction of the battery acid was trapped in the tool and given an escape path when the download port was opened. Trapped pressure potential was not recognized when it was noticed that mud had invaded the tool.

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

- The rig floor was cleared of personnel and the area was allowed to ventilate.
- A JSA was performed on how to handle the tool.
- The tool sealed and laid down by personnel in full protective gear.
- Issued the following to all rigs: "Caution must be exercised when handling any downhole tools that may trap pressure, such as measuring, sampling, logging or coring tools."

Down Load Port



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**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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