

Safety Alert

MMS

U.S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region

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Contact: Glenn Woltman
(504) 736-2438

Shallow-Gas Blowout and Rig Evacuation

While drilling below drive pipe in open water in the South Timbalier area, the operator experienced an unexpected gas flow at surface, causing the well to be put into the diverter system. The uncontrolled flow resulted in the short-term rig evacuation of non-essential personnel. The interval at 1,318 feet had not been identified as a shallow-gas hazard, although a higher interval just below the drive pipe shoe had been identified. Closer attention to background gas recordings, mud weight properties in returns, or other drilling anomalies might have allowed precautionary actions that could have prevented this loss of well control event.

To prevent a recurrence of this type of incident, the MMS recommends that operators consider incorporating the following into their pre-spud well plan:

1. Review of shallow-gas hazard studies prepared for new wells from previously drilled surface locations or in open water should include a study of the old logs, if available, as well as any geophysical data. Drilling personnel should be explicitly warned of shallow-gas deposits identified in previously drilled wells. The potential risks of any drilling project should be fully assessed, more so *when information is sketchy or data limited, and pilot holes should be considered prior to undertaking the drilling of the new well.* Adequate kill weight mud should be available in reserve pits at all times during drilling through known or suspected shallow gas intervals.
2. Conductor casing or surface casing should be set above all known shallow gas hazard zones. Drilling operations should cease immediately upon noting gas shows, appropriate weighted mud should be circulated until the gas is out of the hole, and a flow check taken upon each connection. If drilling operations continue, flow checks should be made on all connections and mud weight in/out measurements noted until the shallow gas intervals are drilled through.
3. Mud weight should be increased slightly through the shallow intervals to enhance well control, unless tight margins prevail between pore pressure and fracture pressure. Personnel should monitor and control drilling rate and drilling mud properties.

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A complete account of the accident is available on the MMS website at
http://www.gomr.mms.gov/homepg/offshore/safety/acc_repo/accindex.html