



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

Notice No. 043

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OCS Operations Safety Alert

Shallow Gas Blowout

A shallow gas blowout recently occurred on an offshore platform drilling rig.

A string of 10" casing had been run and cemented at 2716'. After 5 hours was allowed for the cement to set, the blowout preventer was removed. During subsequent operations to rig down the riser the well started flowing dry gas through the 10" and 16" annulus. Attempts to control the flow were unsuccessful and the platform was abandoned. The well was brought under control sixteen days later with no injury to personnel and no fire or pollution.

The operator believes the primary cause of this gas flow was a change which occurred to the cement resulting in a loss of hydrostatic head pressure against the gas zone. It is believed that an excessive water loss into a porous zone resulted in bridging of the cement which caused the loss of hydrostatic pressure and permitted the gas to enter the well and channel its way to the surface. The operator states this phenomenon is described in the technical paper: William H. Stone and William W. Christian, *The Inability of Unset Cement to Control Formation Pressure*, SPE 4783, Society of Petroleum Engineers.

In order to prevent a recurrence of this type accident the operator is taking the following actions:

1. Use low water loss, quick setting, fast strength cement.
2. Reciprocate casing during cementing operation.

[signed] D.W. Solanas

Oil and Gas Supervisor

Field Operations

Gulf of Mexico Area