

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

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Shallow Gas Blowout and Rig Evacuation

Recently, a well was being drilled from a producing platform. While making a short trip after penetrating shallow formations, the operator experienced a sudden gas influx, causing the well to be put into the diverter system. The uncontrolled flow subsequently caught fire, resulting in abandonment of the rig and platform. Though the well bridged after about ten minutes, damage to the rig and platform are estimated to be two million dollars. It is thought that the gas was swabbed into the wellbore from a shallow sand that had been logged as potentially productive in a previously drilled well. This zone was not identified as a shallow-gas hazard in the well plan. The fire damage was increased by a possible premature failure of the diverter system and subsequent exposure of stored equipment to the uncontrolled flow and fire.

The MMS recommends the following to operators preparing to drill a new well from a previously drilled surface location:

- 1. Shallow-gas hazard studies prepared for new wells from previously drilled surface locations should include a study of the old logs as well as seismic data. Drilling operations should be explicitly warned of shallow-gas deposits identified in previously drilled wells.
- Care should be taken in the design, installation, and bracing of diverter systems to allow enough rigidity to resist flexing failure and to allow uncontrolled flows to exit the system downwind and outboard of the rig. Proper design, construction, and targeting to limit the direct impact of flow upon pipe walls should be observed.
- 3. Where possible, electric cable bundles should be routed so as to be clear of the diverter system. Storage of flammable supplies next to the diverter system should be restricted where possible.

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1 of 1 2/21/2012 4:39 PM