Safety Alert No. 205 -- Blowout Results in Fatality and Injuries

Blowout Results in Fatality and Injuries

Recently a well started to flow up the drill pipe after the floorhands had set the slips, unscrewed the kelly, and made the kelly up to the next joint of drill pipe in the mouse hole. A float valve had been removed from the bottomhole assembly (BHA) prior to drilling out below the surface casing. The rig floor safety valve was stabbed; however, the valve could not be closed, with two men receiving burns from hot mud in the attempt. The valve was removed but the mud flow was too strong to stab the drill pipe. When the gas and mud flow began to reach the top of the derrick, the rig was abandoned. One man was lost during the evacuation and is presumed dead. The well ceased to flow without intervention.

An MMS investigation concluded the following to be causes of the incident:

1. The rig floor safety valve was frozen open and had not been actuated daily, and there was no back-up rig floor safety valve.
2. The driller failed to recognize indications that the well was flowing at the time the kelly was broken, possibly because of poor illumination of the trough. Further, the driller failed to recognize that the PDC (polycrystalline diamond compact) bit had a reverse drilling break and that he had already cut a gas zone.
3. No pre-spud meeting was conducted.
4. The absence of a drill pipe float permitted fluids to flow up the drill pipe, and there were no shear rams in the blowout preventer (BOP) stack.

Therefore, MMS recommends the following to operators and contractors:

1. Maintain a second rig floor safety valve for use during cementing, wire line, and other routine operations, with the primary valve being used for well control purposes only.
2. Actuate and pressure-test both valves as part of the BOP tests.
3. Review existing policies regarding the use of float valves in the BHA, pre-spud meetings, and night operation illumination.

For details of the accident, see OCS Report MMS 2002-062. Copies of the report may be obtained from the MMS Public Information Office located at 1201 Elmwood Park Boulevard, New Orleans, Louisiana 70123 (1-800-200-GULF or local 504-736-2519).