

*Gulf of Mexico  
Deep Water Riser Displacement  
Case History 102-2010*

**Introduction:**

Customer approached Rig-Chem; riser retrieval during disconnects were costing additional rig time and compromising safety issues due to excessive mud left on riser walls.

Customer challenged Rig-Chem for a solution to remove mud from the riser walls using chemicals, while not adding any mechanical steps or increasing rig time.

**Identifying the Problems with the Customer:**

- Large amounts of mud on rig floor from riser walls
- Additional cleaning time between joints while pulling riser
- Unsafe work area for rig personnel & equipment
- Increase in operational time for an expensive day rate rig
- Loss of expensive drilling mud

**Meeting the Challenge:**

- Rig-Chem technical team met and formulated a solution
- Analyzed proposed cleaning product with mud to check cleaning efficiency
- Consulted with customer and constructed deep water riser displacement procedure

The riser displacement package designed utilizing specialized surfactants and viscosifiers to clean and water wet all surfaces. The products used for wellbore displacement meet all EPA regulations for passing the oil and grease test. This eliminated the expensive task of capturing and disposing of products. The surfactant package designed worked under high turbulence eliminating needed contact time, while reducing costly rig time.



**Picture of riser joint after displacement**

**Project Results:**

- Minimum interface between mud and brine
- Pulled riser with no mud falling onto the rig floor from riser walls
- Improved the working environment and safety
- Riser walls were clean and water wet ( *Picture on left* )
- Exceeded customer expectations for mud removal
- Customer estimated 57,000.00 savings
- Eliminated potential accident on rig floor