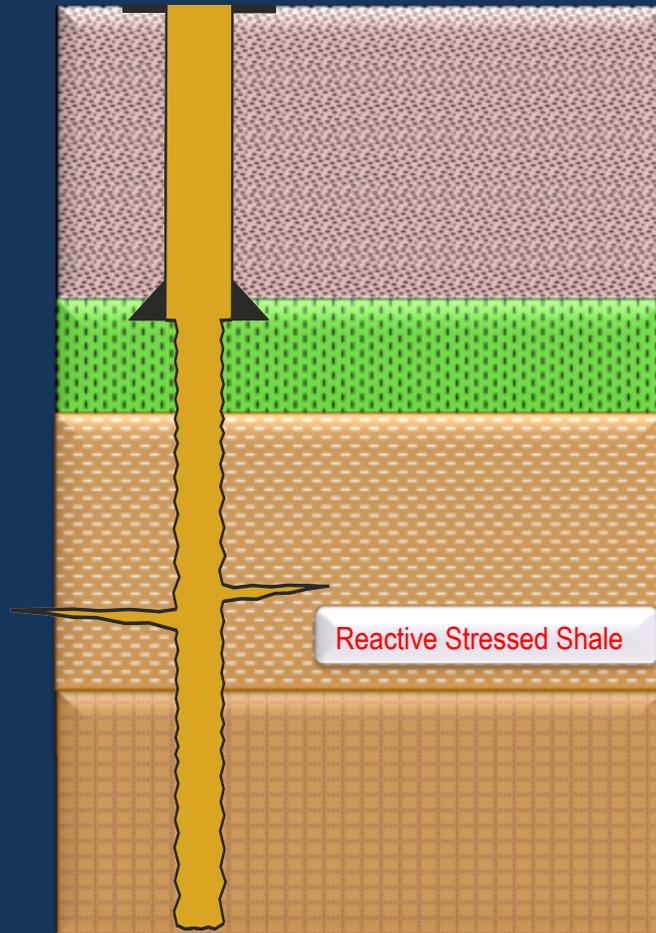


FRACSEAL STABILIZES PROBLEMATIC SHALE FORMATIONS - Romania



The Challenge

The onshore Tintea field in Romania is notorious when it comes to drilling shale intervals of **Pontian and Meotian formations**. Hole instability in these stressed shales poses a major problem and has resulted in **several stuck pipe and lost BHAs** over the years. Selection of drilling fluid, either water based mud or synthetic oil based mud, **does not help to resolve the situation** as similar problems have been encountered using either mud system.

The Action

Recently, a **drilling mud additive, used successfully for promoting hole stability in wells drilled in the North Sea** was proposed to be used in the Tintea field. This additive which is **primarily a borehole stabilizing and lost circulation material** consisting of **micronized organic cellulose fibers** also helps to stabilize the stressed shale formations where micro-fractures exist by effectively bridging them off.

The Result

Hole remained stable without any excessive drag, over-pull, or stuck tendencies. Following this successful field trial, **it is now the product of choice** whenever hole stability issues are encountered in Tintea field. **It was used in two subsequent wells to the trial well and delivered the same result.** The Company's drilling fluids specialists working closely with the Service Providers **have perfected the combination of using these fibers together with calcium carbonate** in the appropriate concentration and have delivered wells within time and budget.