

ABSTRACT

The effects and treatment of shale
contaminated water based drilling fluids

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Shale contamination is a major problem in drilling operations in regions of sloughing shales such as in TRINTOC's Balata East Field.

This project was therefore aimed at examination of chemical methods of treatment by:

- i) a synthetic polymer
- ii) a ferrochrome lighosulphonate, and
- iii) a lignite consisting of a humic acid material

This was done by preparing muds in the range 8.7 - 11.0 lb/gal, contaminating them with shale, observing the changes in properties and then finally treating in order to adjust these properties back to original or close to original as possible.

The polymer was found to be the most effective treatment. However, all three chemicals have one side effect - the plastic viscosity increases with chemical addition.