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**Evaluation of Wheat Husk as Environment Friendly Fluid Loss Additive as a Substitute of CMC(LVG) in Water based Drilling Fluid up to 100°C.**

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**Abstract**

Filtration control is an important property of a drilling fluid particularly while drilling through the permeable formations. This property of a drilling mud is obtained or enhanced using various additives. Currently organic polymers are commonly used as additives to control filtrate loss in water based drilling mud and exhibits negative impacts on the environment when released, hence there is a tremendous need for new environmental friendly, biodegradable additives which can help in controlling filtration loss with least effect on environment and also on worker's health. This study involves the introduction of environmental friendly food waste product i.e. "wheat husk powder" (WHP) as a filtration loss additive. The effects of various concentration of WHP on physical and chemical properties of a mud such as mud weight, pH, PV, AV, YP, gel strength, filtration loss (API), BHR and AHR rheological properties were evaluated and all the results were compared with the properties of the reference mud prepared with the conventionally used filtration loss additive CMC (LVG) in order to asses and validate the effectiveness of WHP in optimizing the performance of drilling mud. The results obtained showed that WHP was behaving as a filtration loss reducer and the drilling mud prepared with WHP was thermally stable at up to 100 0C. Hence WHP is successful replacement of CMC (LVG) in aspect of cost effectiveness, filtration loss reduction, environmental friendly and thermal stability.

**Keywords:**

WHP - wheat husk powder, Filtration loss, Mud cake, CMC (LVG) - carboxy methyl cellulose (Low Viscous Grade), Water based mud, Natural additive.

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