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**Experimental Investigation of Rheological Properties of Drilling Fluid with Size Variation of Clay Particles.**

Aashish Tyagia, Arun T Jb, Midhun Krishnac, Romith Vijayd, **Bhairab Jyoti Gogoie**

a,b,c,d.Student & Dept. of Petroleum Engineering, Presidency University, Bangalore, India

e.Assistant Professor, Dept. of Petroleum Engineering, Presidency University, Bangalore, India

**Abstract**

Drilling fluid is one of the major component for any drilling operation. Clays act as a reactive phase in any aqueous based fluid. In the recent times the rheological and filtration loss properties has been improved by addition of nano particles in drilling fluid system. In this study different sizes of Bentonite clay particles were used to prepare drilling fluid samples. Rheological and filtration loss properties were studied and it was found that the size of clay particles has lot to do with these properties. Significant change in drilling fluid properties has been observed and it was concluded that lesser the size of the clay particles better will be the properties.

**Keywords:**

Drilling mud, Gel strength, Rheological properties.

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