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(54) Title of the Invention: **Invert emulsion drilling fluids with fumed silica and methods of drilling boreholes**
Abstract Title: **Invert emulsion drilling fluids with fumed silica and methods of drilling boreholes**

(57) An invert emulsion drilling fluid employing as a suspension agent very fine sized fumed silica in combination with a primary viscosifier such as for example a fatty dimer diamine, and a method for the use thereof in drilling wellbores, with good rheological properties at high temperatures and pressures. In one embodiment the drilling fluid is free of organophilic clays and lignites and free of non-hydrophilic "low gravity solids," and the fumed silica is a hydrophilic fumed silica, which provides enhanced suspension of drill cuttings without barite sag while maintaining good rheological properties at high temperatures and pressures.

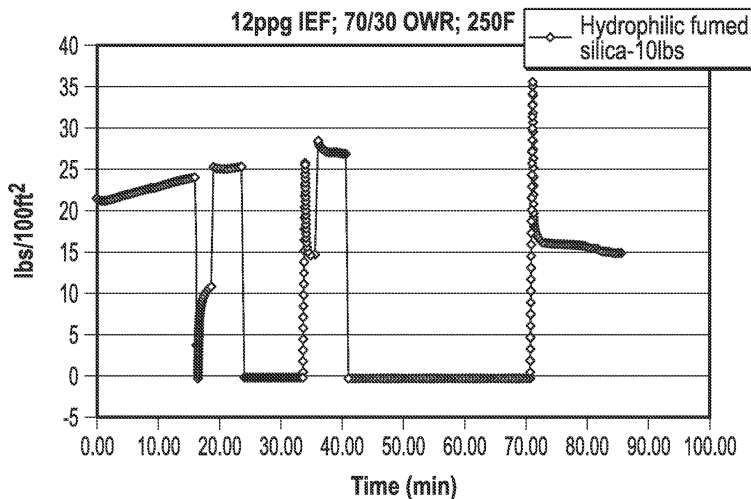


FIG. 1