

# United States Patent [19]

Mondshine

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[54] WELL DRILLING, WORKOVER AND COMPLETION FLUIDS

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[57] **ABSTRACT**

Nondamaging treating fluids containing sparingly soluble hydrated borate bridging agents having a particle size distribution within the range about 1 micron to about 2000 microns are disclosed. The treating fluids comprise an aqueous salt solution having a density from about 1.0 g/cm<sup>3</sup> to about 1.20 g/cm<sup>3</sup>, the hydrated borate bridging agent in an amount sufficient to bridge and seal off a subterranean formation contacted by the treating fluid, and a viscosifier and suspension additive in an amount to provide sufficient viscosity to maintain the bridging agent in suspension. A fluid loss control additive may be added to enhance the fluid loss control and formation sealing capacity of the treating fluid.

Well treatments may be practiced by pumping or discharging the fluid or a slug or pill of the fluid into an oil, gas water, injection or storage well where operations are to be conducted in which it is desired to temporarily plug the permeable zone while such operations are carried out. Thereafter, the hydrated borate bridging agents are removed by connate water from the permeable zone, or by a nonsaturated brine wash, or ordinary water or acid circulated in the well.

**20 Claims, No Drawings**