



Instant Linear Gel Preparation for Coal Bed Methane Gas Operations

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ABSTRACT

In earlier article we prepared fracturing linear gel with fossil diesel, bio-diesel and also used suspending, anti-settling agents and emulsifiers. But through this research a novel and an efficient method for the preparation of linear gel direct mix with water, guar gum and sodium acetate together instantly. In this instead of diesel we used water and no need to mix anti settling agents, suspending agents, emulsifiers that resulted as 30 viscosity linear gel. Ammonium per sulphate or Ammonium peroxydisulphate and enzyme-G used for oxidation purpose to break the gel gradually at particular static temperature. Degradation pattern observed from the breaker test showed that reduction in gel viscosity depends on time, temperature & breaker concentration. Observations from experiments revealed that small concentration of breaker provides rapid break compared to oxidative breakers. This article, designing of fracturing fluids describes how to use the fluids viscosity generated by the gelling agents like guar gum for CBM operations.

Highlights:

- Fracturing fluid is roughly 99% water but also contains numerous chemical additives as well as propping agents, such as sands, that are used to keep fractures open once they are produced under pressure.
- The Linear gel preparation hydrated with water and guar gum, observed their properties in different temperatures.
- In frac operation With Fossil diesel and bio-diesel has many draw backs that way we tried with only water and guar gum used and it is eco-friendly and economically less for Frac operations.

Keywords: Breakers; CBM operation; Fragmentation; Linear gel; Viscosity properties.
