

Sanjel Energy's VISWEEP DM mix-on-the-fly spacer delivers reduced overall costs and enhanced safety exposure while lessening project complexity

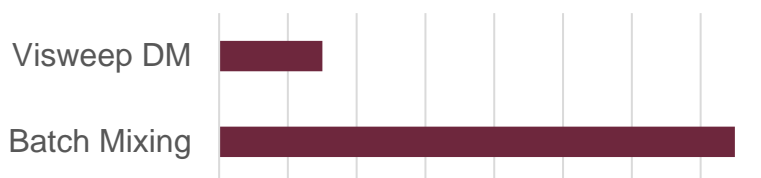
EMERGING TECHNOLOGY

As drilling operators trial hole and casing size configurations to optimize drill speed and completions performance, the volume of spacers required to meet IRP 25 guidelines can become larger than the tanks of most common cementing pump units.

Batching large spacer volumes may require additional tanks or units, which increases both complexity and the chance of contamination. This type of batching requires additional valuable rig time to hydrate the polymers, while manually adding the weighting material is a human labour intensive process with inherent increased injury and chemical exposure risks.

Oil-based drilling fluids are even more complicated as they require additional chemical additives in the form of water-wetting surfactants.

Time to Mix a 10 m³ Spacer



Sanjel Energy's VISWEEP DM (Dry Mix) consists of a rapid hydrating polymer mixed with a suitable weighting material that includes pH modifiers for optimized mixing. VISWEEP DM IS (Invert Systems) includes powdered chemicals to convert the oil-wet casing and formations to water-wet for improved cement bonding.

VISWEEP DM is mixed-on-the-fly utilizing the same equipment and procedures as mixing a cement slurry. The spacer is mixed in minutes and pumped directly downhole using advanced density control and the density averaging tank. Polymer type and loadings are easily optimized for rheology and stability for excellent displacement efficiency at any well temperature. Additional performance additives such as salt, lost circulation, reactive silicates, etc., can also be added as required per the job design.

Beyond being a primary cement spacer, VISWEEP DM can also be weighted to 2400 kg/m³ for downhole stabilization or well kill situations.





VISWEEP DM has been proven to:

- ◆ Optimize rheology for exceptional drilling fluid displacement
- ◆ Reduce rig time related to spacer batch-mixing procedures
- ◆ Tailor volume and density in real-time
- ◆ Provide easy to mix industry recommend spacer volumes for all well configurations
- ◆ Reduce repetitive lifting and twisting movements thereby lowering the risk of injury
- ◆ Reduce potential chemical exposure hazards for workers

VISWEEP DM successfully performed on a critical well steam stimulation project which included over 30 successful intermediate and liner jobs.

VISWEEP DM IS successfully cleaned invert drilling fluid on a series of Montney two stage jobs where Equivalent Circulating Density management was carefully planned and executed.