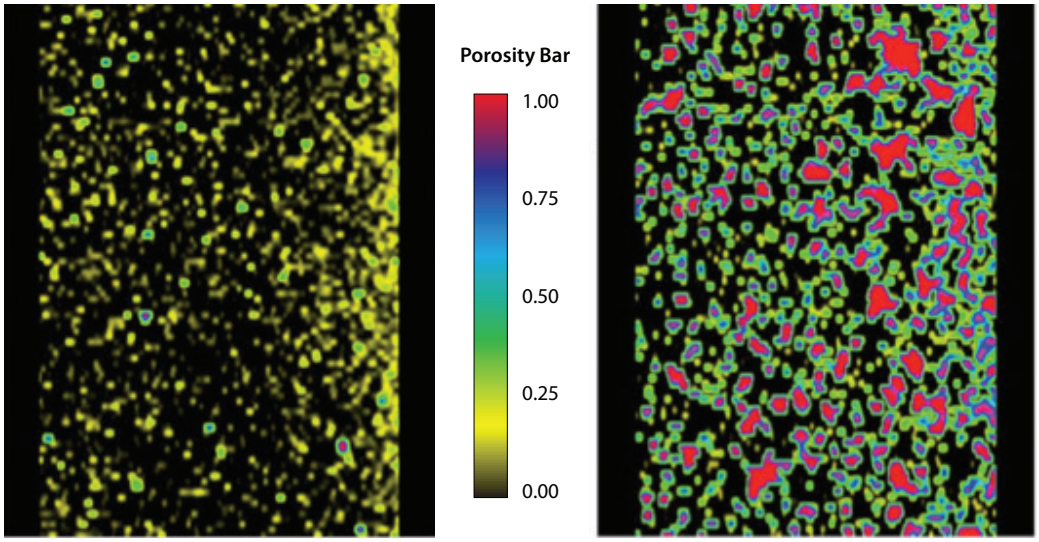
SANDSTILL™

CONTROL PROPPANT FLOWBACK

It's important for proppant to stay in place, not flow back to the wellbore. Proppant flowback can lead to reduced fracture conductivity, plugged downhole and surface production lines, and the additional need for coiled tubing clean-outs. This can not only increase costs, but also decrease production and revenue. Resin-coated proppants can be used to help prevent flowback issues; however, this solution can also present a significant rise in cost for the producer.

Trican's SandStill™, a proprietary proppant control system, provides a cost-effective alternative to expensive resin-coated proppants in both slick water and guar/borate systems. This patented technology creates a strong cohesive force among proppant grains independent of fracture closure, resulting in proppant agglomeration and minimized flowback after the fracturing operation, as well as during production. Additionally, compared to conventional frac sands, SandStill demonstrates a loosely packed proppant for improved conductivity. Proppant pack conductivity is also improved due to decreased generated fines.

Untreated (left) and SandStill treated sand (right) in slick water



CT scan of untreated (left) and SandStill treated sand (right) in guar/borate system after gel break showing increased porosity

ADVANTAGES

In Slick Water:

- Cost-effective product allows treatment of significantly more of the proppant pack than resin-coated sands
- Reduced fines generation and increased porosity improves conductivity of treated frac packs
- Increased propped area due to 10%-20% increase in sand pack volume
- Effective at a wide range of bottom-hole temperatures, from ultra-low to high (5°C-120°C) (41°F-250°F)
- Resilient to stress cycles, unlike resin-coated sands
- Effective with all proppant sizes and types, including natural sands and ceramics

In Guar/Borate:

- Cost-effective by minimizing proppant flowback using one component (SandStill), at a fraction of the cost of resin-coated sands
- Reduced fines generation and increased porosity improves conductivity of treated frac packs
- Increased propped area due to 30%-40% increase in sand pack volume
- Effective at a wide range of bottom-hole temperatures, from ultra-low to high (5°C-120°C) (41°F-250°F)
- Improved proppant placement: compared to untreated sand, SandStill settles significantly slower before and after gel break
- Resilient to stress cycles, unlike resin-coated sands
- Effective with all proppant sizes and types, including natural sands and ceramics

For more information, please contact **Trican Well Service**.

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