Schlumberger

Salik

Local-sand-enabled flow-channel fracturing service

APPLICATIONS

- Consolidated rock fracturing treatments
- Single- and multistage, vertical and horizontal oil and gas wells
- Conventional and unconventional formations
- Formation temperatures from 140 to 350 degF [60 to 176.7 degC]

BENEFITS

- Enhances production through infinite fracture conductivity and greater effective contact area
- Lowers risk of screenout
- Reduces well completion time with less propping material and water
- Minimizes total well completion cost
- Improves long-term performance due to engineered flow channels' stability

FEATURES

- Use of local sand instead of imported proppant
- Longer effective fracture half-length
- Lower pressure along the fracture for higher reservoir pressure to the wellbore
- Enhanced fluid and polymer recovery
- Less fracture face damage

Salik* local-sand-enabled flow-channel fracturing service uses locally available sand instead of proppant when fracturing. Using the HiWAY* flow-channel fracturing technique, Salik service enhances well productivity by propping open flow channels, and it reduces costs by replacing up to 50% of imported proppant with local sand.

Use of local sand

Salik service provides operators unprecedented capability for total cost reduction by using local sand as a less-expensive proppant and improving supply chain. By eliminating the need to import proppant and clear customs inspections, the service also enhances overall materials logistics.

No conductivity losses

Advanced engineering helps to provide robust channel structure even when non-API local sand is used for fracturing operations, with no fracture conductivity damage caused by fines from sand crushing.

The stability of the flow channels is maintained by using a proprietary fiber that protects the structure from surface to reservoir until the fracture closes and the in situ stress takes over.

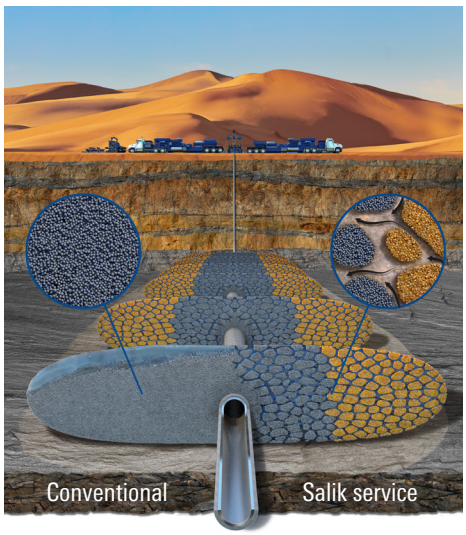
Fracturing enabled by HiWAY technique

Salik service is deployed using the HiWAY technique, which provides enhanced fracture conductivity that contributes to well productivity. With this technique, Salik service decreases the likelihood of screenouts by reducing the effective proppant concentration and pulsing the proppant. The service also increases effective fracture half-length due to improved gel cleanup, particularly from the tip of the fracture.

With local sand from Salik service, the channels created using the HiWAY technique are less prone to plugging, either by scale or fines migration, than a conventional proppant pack, which improves long-term performance.

Reliability

Salik service has been deployed in more than 500 stages in eight countries to date.



Salik service enables operators to replace more than 50% of the ceramic proppant normally required for a fracturing job with inexpensive, locally sourced sand.

*Mark of Schlumberger

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