SandTrap® ABC Formation Consolidation Service
Aqueous Based System to Help Control Sand Production

With recent emphasis on recovery of bypassed hydrocarbon reserves and extending mature field production, formation consolidation techniques present viable completion options. Since economics is a key decision criterion, resin consolidation offers a reliable and cost-effective sand control solution.

Advantages of Aqueous Based Carrier (ABC) Systems
SandTrap® ABC service provides benefits that facilitate the use of resin consolidation for oil and gas reservoirs requiring sand control.

- High-strength consolidation can be achieved with small amounts of low-viscosity consolidating material.
- High flash point makes the system easier to manage, especially in offshore environments.
- Large over-displacement of this material is not required to re-establish permeability.
- No special solvents required on location for equipment cleanup.

Foaming Provides Additional Important Benefits
- Treatments can be bullheaded due to no requirement for isolating the zones to be treated.
- Foam acts as a good diverter, helping to achieve a more effective system in long production intervals by overcoming the effects of variable permeabilities.
- Foam acts as a resin extender by increasing the bottomhole volumes and making it operationally easier to place small-volume consolidation treatments.
- The introduction of a foamed fluid into a proppant pack increases the capillary forces which results in better coating and improved strength development.

How SandTrap ABC Service Works
Preflush stages are employed to displace produced fluids and enhance the attraction between the mineral surfaces and consolidation material.

As the treatment enters the pore spaces, a thin, uniform coating of resin covers the formation sand grains. Capillary pressure causes the resin to migrate to the sand grain contact points providing significant strength.

Subsequent displacement by the post-flush enhances permeability retention.

Fig. 1—Photomicrographs of consolidated samples of core material show how the SandTrap ABC material is concentrated at contact points to provide significant strength with essentially no reduction in reservoir permeability. Note that the pore spaces are essentially unaffected.
Applications
SandTrap ABC service can be applied to the following new or existing well completions.

- Cased and perforated.
- Supported openhole which includes stand-alone screens or perforated liners.
- Screenless through-tubing recompletions for accessing bypassed reserves.
- Failed gravel pack or fracpack sand-control completions.

Contact of the treatment with the annular gravel pack and surrounding formation sand can be enhanced with fluidic oscillator technology provided by Pulsonix® TF service.

Case History
Gulf of Mexico: Operator was looking for a rigless through-tubing sand control solution in order to produce oil reserves left behind casing. The 8-ft pay interval was perforated via electric line guns through the tubing and casing. SandTrap ABC service treatment was bullhead pumped down the production tubing and into the formation.

- Initial production after treatment – 100 bopd
- Later production – 350 bpd total fluid
- Production is still sand free after 1 year

For more information about how SandTrap® ABC service can help make your assets more productive, contact your local Halliburton representative or email sandcontrol@Halliburton.com.