Proven Technologies For An Integrated Solution

**Versa-Trieve® Packer**
The Versa-Trieve sealbore retrievable packer provides the reliability and durability of a permanent packer. Designed for use as a sand-control or production packer, it is ideal for deviated, horizontal, or extendedreach well applications. The packer can be remotely set and tested with the integration of an eRED ball valve to avoid needing to drop a setting ball on extendedreach wells.

**Heavy Hang-Weight HPT Hydraulic Setting Tool**
Designed to set Versa-Trieve packers, the HPT soft-release hydraulic setting tool with higher tensile load capacity is an advancement over existing setting tools. Torque may be applied through the assembly while running in the well, allowing the tool to be “soft” released from the packer to help avoid potential swabbing. This service tool provides pressure maintenance on the reservoir at all times.

**Reverse-Out Check Tool**
An engineered multiple-operation valve, this tool helps control flow during horizontal gravel-pack jobs and is an integral part of the HPT sand control service tool.

**PetroGuard® Shunt Screen**
The PetroGuard Shunt screen can enhance gravel packing by providing an alternate path that replicates the borehole-screen annulus as a flow path for allowing slurry to be pumped and proppant packed throughout all of the producing intervals/zones. The system can also pack long, highly deviated or highly permeable formations, while minimizing flow past shaly sections of the reservoir.

**ZoneGuard® Shunt Packer**
The ZoneGuard Shunt packer’s unique feed-through design offers an alternate path, enabling multiple gravel packing by allowing the slurry to be placed throughout the reservoir. This packer features our industry-leading, high-performance sealing elements to provide reliable zonal isolation in the most challenging environments.

**eRED® Ball Valve**
The eRED ball valve is incorporated at the end of the washpipe and used to set the ZoneGuard packer before being reopened for gravel-pack operations. The Remote Open Close Technology ball valve can be repeatedly opened and closed through remote command for maximum flexibility.

**AquaLinear® and AquaLinear® HT Fluid Services**
AquaLinear service is a versatile and easy-to-mix viscosified fluid system. AquaLinear fluid is the choice for openhole displacement and gravel packing using alternate path systems and other applications benefiting from a shear-thinning, low-damage fluid system with an internal breaker system for reliable and controlled degradation.
**ZonePac™ System Features**

- Helps provide pressure maintenance at all times throughout the completion process while offering wash-down capability when running in hole.
- Utilizes alternate path technology to help achieve a complete pack.
- Allows displacement of the open hole prior to setting the isolation packers for better openhole displacement efficiency.
- Helps reduce rig time significantly compared to conventional systems using swellable packers.
- No minimum hydrostatic requirement for setting isolation packers.
- Isolation packers set in a controlled manner without excessive manipulation of service tool.
- Large tolerance to openhole diameter (from 8 ½-in. to 11-in.).
- Helps reduce ECD during gravel-pack operations important for low fracture gradient formation without the need of relief valves.
- Optionally eliminates the need to drop a ball to set the gravel-pack packer for challenging well trajectories.

**Robust and reliable openhole gravel packs with zonal isolation**

**MAXIMIZE RECOVERY AND COMPLETION LONGEVITY**

As reservoirs become more complex and heterogeneous, operators require a reliable sand control solution. Halliburton is the world leader in sand control completions with an outstanding track record in openhole gravel packs. While openhole gravel packing is ideal for low skin and high efficiency, this method presents a challenge when needing to effectively isolate unwanted fluid/shale zones.

The Halliburton ZonePac™ system enables gravel packing in challenging environments through alternate path technology and multiple isolation packers, helping create the necessary compartmentalization for effective zonal isolation.

The ZonePac system uses Halliburton field-proven completion technologies for a total solution approach to sand control:

- Versa-Trieve® Packers
- Heavy Hang-Weight HPT Hydraulic Setting Tool
- Reverse-Out Check Tool
- PetroGuard® Shunt Screen
- ZoneGuard® Shunt Packer
- eRED® Ball Valve
- AquaLinear® and AquaLinear® HT Fluid Services

The ZonePac system’s unique combination of technologies helps enable the safe conveyance of the screen assembly to final depth while maintaining wash-down capability. At depth, the Versa-Trieve gravel-pack packer is set and tested by dropping a ball or remotely while maintaining hydrostatic pressure on the formation. Thereafter and before gravel packing, the open hole may be displaced or conditioned as needed. The eRED ball valve, located at the end of the washpipe, is then closed, using a predefined remote command. This allows pressure to be applied in the washpipe to set the ZoneGuard Shunt packers and creates multiple reservoir compartments prior to gravel-pack placement.

The gravel pack is placed via the PetroGuard Shunt screens to help ensure successful and complete gravel packing of each compartment. The filter cake can be treated after the gravel packing as an option.
Robust and reliable openhole gravel packs with zonal isolation

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The ZonePac system’s unique combination of technologies helps ensure the safe conveyance of the screen assembly to final depth while providing wash-down capability. At depth, the Versa-Trieve gravel-pack packer is set and tested by dropping a ball or remotely while maintaining hydrostatic pressure on the formation throughout the installation process. Thereafter and before gravel packing, the open hole may be displaced or conditioned as needed. The eRED ball valve, located at the end of the washpipe, is then closed, using a predefined remote command. This allows pressure to be applied in the washpipe to set the ZoneGuard Shunt packers and creates multiple reservoir compartments prior to gravel-pack placement.

The gravel pack is placed via the PetroGuard Shunt screens to help ensure successful and complete gravel packing of each compartment. The filter cake can be treated after the gravel packing as an option.

ZonePac™ System Features

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- Utilizes alternate path technology to help achieve a complete pack.
- Allows displacement of the open hole prior to setting the isolation packers for better openhole displacement efficiency.
- Helps reduce rig time significantly compared to conventional systems using swellable packers.
- No minimum hydrostatic requirement for setting isolation packers.
- Isolation packers set in a controlled manner without excessive manipulation of service tools.
- Large tolerance to openhole diameter (from 8 ½-in. to 11-in.).
- Helps reduce ECD during gravel-pack operations (important for low fracture gradient formations) without the need of relief valves.
- Optionally eliminates the need to drop a ball to set the gravel-pack packer for challenging well trajectories.
Proven Technologies For An Integrated Solution

**Versa-Trieve® Packer**

The Versa-Trieve packer provides the reliability and durability of a permanent packer without the cost and complexity. Designed for use as a sand-control or production packer, it is ideal for deviated, horizontal, or extended-reach well applications. The packer can be remotely set and tested with the integration of an eRED ball valve to avoid the need to drop a setting ball on extended-reach wells.

**Heavy Hang-Weight HPT Hydraulic Setting Tool**

Designed to set Versa-Trieve packers, the HPT software-controlled hydraulic setting tool with higher tensile load capacity is an advancement over existing setting tools. Torque may be applied through the assembly while running in the well, allowing the tool to be "soft" released from the packer to help avoid potential ballooning. This service tool provides pressure maintenance on the reservoir at all times.

**Reverse-Out Check Tool**

An engineered multiple-operation valve, this tool helps control flow during horizontal gravel-pack jobs and integrated as a part of the HPT sand-control service tool.

**PetroGuard® Shunt Screen**

The PetroGuard Shunt screen can enhance gravel packing by providing an alternate path that replicates the borehole-screen annulus as a flow path for allowing slurry to be pumped and proppant packed throughout all of the producing intervals zones. The system can also pack long, highly deviated or highly permeable formations, while minimizing flow past shaly sections of the reservoir.

**ZoneGuard® Shunt Packer**

The ZoneGuard Shunt packer’s unique feed-through design offers an alternate path, enabling multizonal gravel packing by allowing the slurry to be placed throughout the reservoir. This packer features our industry-leading, high-pressure sealing elements to provide reliable zonal isolation in the most challenging environments.

**eRED® Ball Valve**

The eRED ball valve is incorporated at the end of the washpipe and used to set the ZoneGuard packer before being re-opened for gravel-pack operations. The Remote Open/Close Hydraulics ball valve can be repeatedly opened and closed through remote command for maximum flexibility.

**AquaLinear® and AquaLinear® HT Fluid Services**

AquaLinear service is a versatile and easy-to-mix viscosified fluid system. AquaLinear fluid is the choice for openhole displacement and gravel packing using alternate path systems and other applications benefiting from a shear-thinning, low-damage fluid system with an internal breaker system for reliable and controlled degradation.
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