## **DEEP SERVICE TOP SEAL™**

## **UNIT 680**

The *TechWest Deep Service Top Seal* is designed with a focus on High Temperature applications including SAGD (Steam Assisted Gravity Drainage), and Multi-Stage fracturing operations. The Deep Service Top Seal™ packer is a thermal variation of the proven and reliable TechWest Liners' Liner Lap Packer tool platform.

It is designed to be delivered downhole on the model HRN Hydraulic Rotating Running Tool with the HydroAct<sup>TM</sup> (Hydraulic Actuator) for non-cemented applications. The HR running tool can push, pull and rotate to the right delivering the liner through challenging structure on the way to depth. At depth, a plug is pumped to seat allowing pressures to be built-up in the drill pipe. At a predetermined pressure, the packer is set, and annular tests can be conducted to verify element sealing integrity. A further increase in pressure releases the running tool. When the running tool is pulled from the Deep Service Top Seal packer, a set of ports are exposed allowing the drill pipe to be drained as it is pulled out of the hole.

The Deep Service Top Seal packer may be set-up in numerous configurations to suit operational requirements.

There are versions without slips, hold-up and -down slips. For thermal applications it is usually dressed in thermal sealing elements rated for high temperature performance.

For non-thermal applications there is the opportunity to dress the packer with Nitrile, HNBR or HT/HP (High Pressure / High Temperature) Ecner Array® sealing elements.

While L80 metallurgy is the standard offering, other materials are readily available to meet operational needs. Economical setting sleeves or polished bore Tieback Receptacles maybe provided in a variety of lengths.

The Deep Service Top Seal packer also comes in a retrievable version with holdup and -down slips.

