



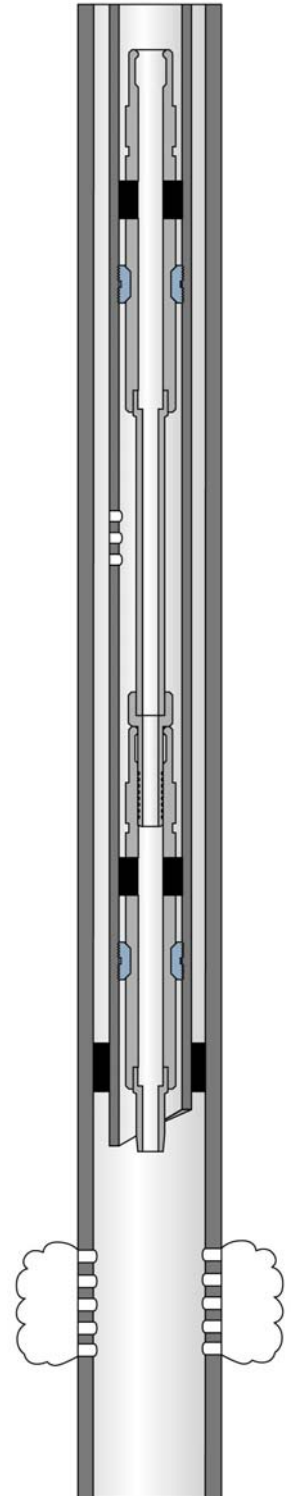
## Workover / Completion Systems

### TTS Tubing Patch Straddle Pack Installation

(Utilizing the TTS Retrievable Thru-Tubing Packer System)

#### Features/Benefits

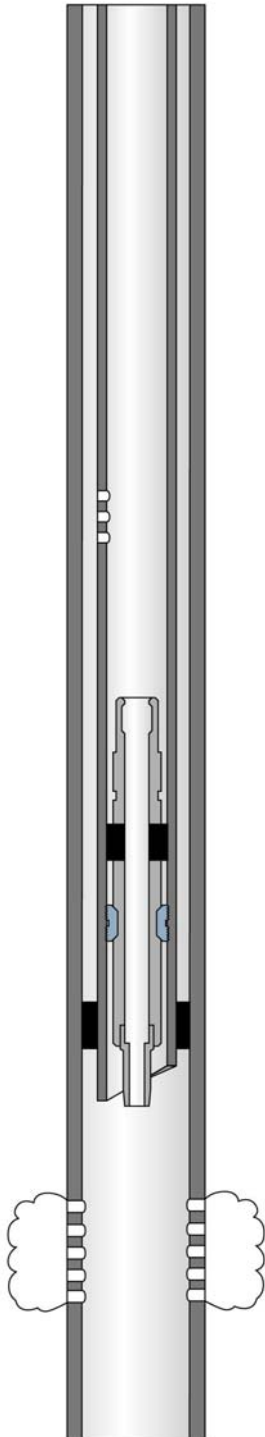
- ♦ Can be installed via coil tubing, electric line, slickline or a combination, *allowing for operator flexibility and associated cost savings.*
- ♦ Requires only two trips to set or retrieve on slickline or wireline; one or two trips on coil tubing. *Saves time and risk compared to conventional tubing stop and pack-off alternatives requiring several trips to install.*
- ♦ Use of two TTS Retrievable Seal Bore Packers and a Floating Seal Assembly easily accommodate production-tubing movements caused by downhole temperature changes due to well killing, stimulation, and producing operations. *Utilizing mechanical compression or tension set packers, wireline pack-offs, as well as inflatables, has little tolerance to production tubing movement. Also large I.D./O.D. ratio packer creates larger finished bores than competitive systems.*
- ♦ Live well operations can easily be tolerated. *In some cases eliminates the need and expense of well killing operations.*
- ♦ Each packer can be tested along with all connections of coil tubing as they are run into the well. *Allows for removal and replacement of any failed components prior to attempting to flow the well.*
- ♦ Superior sealing and anchoring system. Multi-durometer packing systems hold pressure from above or below. *Bi-directional caged slip design anchors packer in both directions and can handle much higher tail pipe loads (long patches not a problem).*



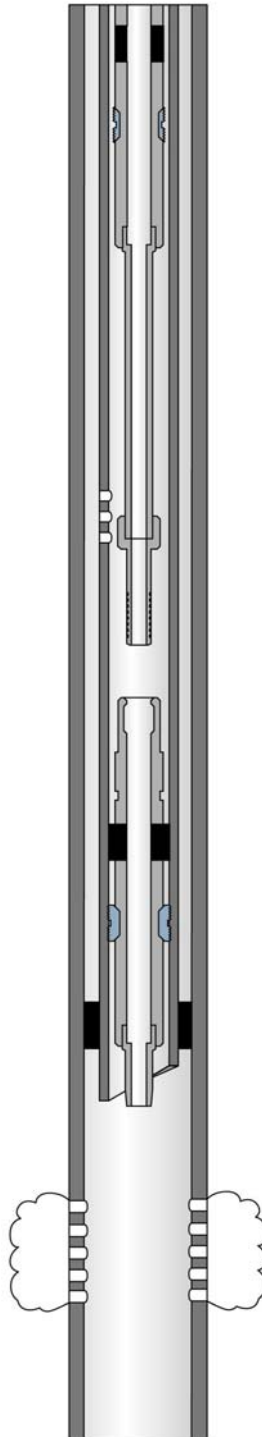
## ***Tubing Patch***

(Straddle Pack)

**Set Lower Packer**



**Locate Seals**



**Upper Packer Set**

