



# TP™ Series

*Hyper-Stable PDC Bits*



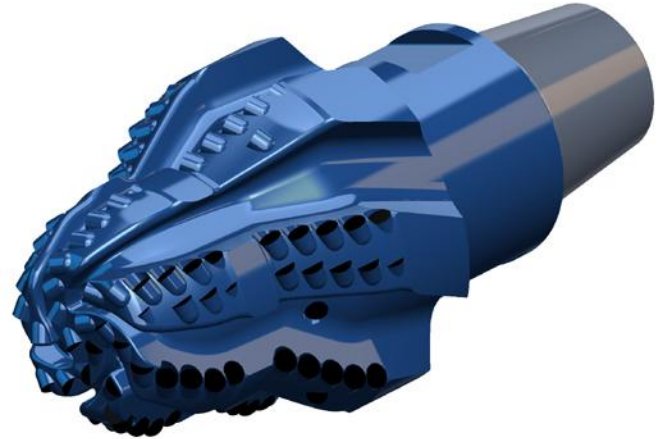
The OTS TP™ Series is a family of PDC bits designed for difficult drilling conditions. TP™ (Tapered Profile) bits are designed for maximum lateral stability and extended bit life in hard, abrasive formations.

**Hyper-Stability** – TP™ bits feature a two-stage drilling action, utilizing a pilot bit section followed by a reaming section. This provides two gage pads at different diameters to reduce lateral movement. The reaming section of TP™ bits is self-centering, reducing stick/slip events and bit whirl. TP™ bits utilize a spiral cutting structure to reduce linear contact points during rotation.

**Reduced Drilling Torque** – the same features that make the TP™ bits hyper-stable also reduce drilling torque, especially in hard or heavily intercalated formations. The torque values in a typical TP™ bit reflect the value of the pilot diameter coupled with a reamer, rather than the full diameter. The smaller pilot section experiences the formation changes first, while the reamer section enlarges the existing pilot hole, reducing and smoothing torque output.

**Reduces Rock Strength** – TP™ Series bits utilize a relief area directly behind the pilot bit section. This allows stresses native to the rock to relax into the relief area, reducing their effective hardness. The reamer section of a TP™ bit can then enlarge through rock that has been relieved of in-situ stress.

**Higher Bit Weight Capability** – when drilling harder rock, more energy is required. Adding high bit weight to typical design can produce bit tilt, where the last drill collar leans into the borehole wall, tilting the bit off vertical. By using two separate gage pads at different diameters, the TP™ Series bits are stabilized against bit tilt. This allows a TP™ to function with much higher drilling weight (without near bit stabilization) than conventional design bits.



NEXT GENERATION INNOVATION



**TP Series™**  
Hyper-Stable Bits