**Well Data**

- **Location:** China - Asia Pacific
- **Well Type:** Oil Producer - Sandstone
- **Installation Date:** November 2014
- **Depth:** 1700 - 1945m

Tendeka was asked to provide a solution that would reduce water cut from oil producers to allow increase in oil production rates and increase field recovery rates.

**The Challenge**

Wells producing from the field were typically producing with high water break-through early in their life. The existing wells in the field were completed with stand-alone screens where oil production was declining due to increase in water cut. The length of the well is relatively short and production is minimal (1000m3/d liquid) therefore a challenge for inflow control.

**Tendeka’s Solution**

Tendeka’s FloSure Autonomous Inflow Control Device (AICD) provides the ability to choke water in the producing zone based on the difference in viscosity between oil and water. The retrofit application consists of installing AICD subs within existing stand-alone screens along with packers for zonal isolation.

**Retrofit solution**

AICDs have been implemented in many brownfield wells as a retrofit solution after water cut typically reaches up to 96%.

In China, one of the first AICD retrofit installations to control water cut in a heavy oil environment have shown a significant oil recovery, as shown in Figure 3. The results of the installation from 2014 have shown significant water cut reduction from average 96% water cut before AICD installation to around 93.6% water cut after AICD installation. This is a significant reduction of water cut for well that producing at 1000m3/day liquid rate. The water cut reduction have increase the oil production from 43m3/d to 55m3/d of oil production. The results of these wells have shown an increase of oil production for approximately 27% after installing AICD. Based on the positive results of these wells there have been many more well on the fields have been completed with AICD as retrofit solution or primary completion for new well.

**Project Results**

Actual oil production indicates an increase of as much as 50% - 65% daily after AICD installation. Water cut was reduced from 95% prior to installation to 90% post installation resulting in a significant increase in oil production.
— Improvement of oil production averaged from 43m³/d to 55m³/d ~ 20% to 30% Daily oil increments
— Reduction of water cut averaged from 96% WC to 93% WC ~ 5% WC% Reduction