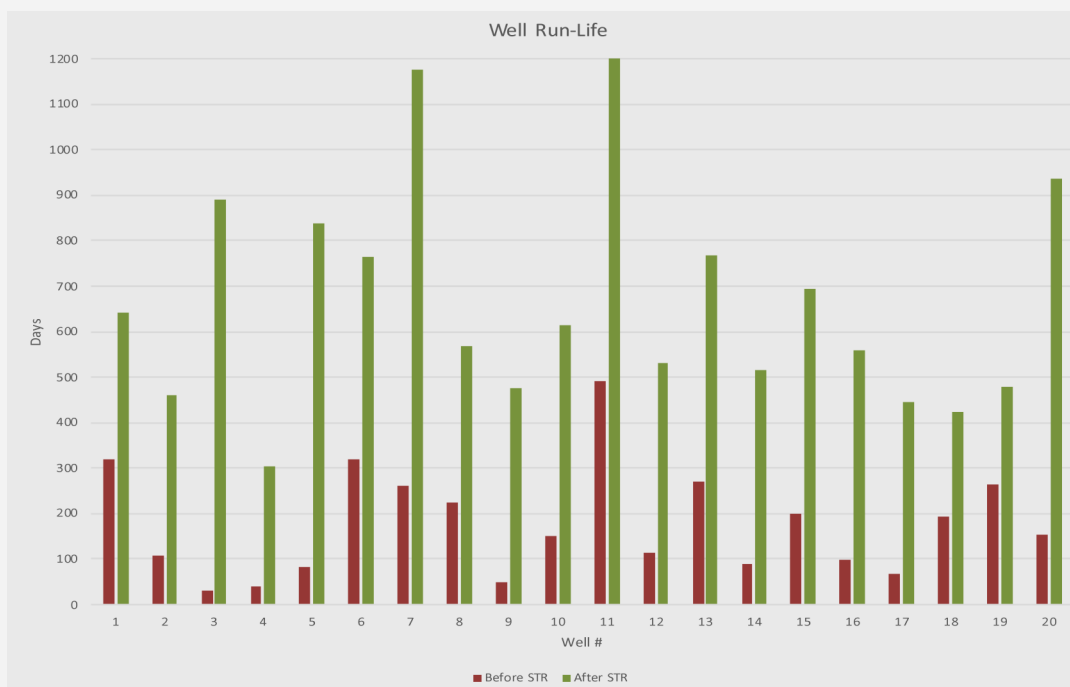


Surface Tubing Rotators are used in both Progressive Cavity Pump (PCP) and Reciprocating Rod Pump (RRP) systems to decrease the downtime of the wells due to Holes in Tubing (HT) across the globe. The average proven results show and increase to the production tubing life by 3 or more times, resulting in less workover intervention frequency and less Operational Expenses (OPEX) for the oil producers.

A case study performed by an Oil Producer, took a sample of 20 wells to install Surface Tubing Rotators.¹ The 20-well sample had a recorded average MTBF of 176 day, ranging from 30 days before HT on the worst well, to 492 days HT on the best performing well. Trend 1, shows the run-life comparison before and after the installation of the Surface Tubing Rotator.



Trend 1—Wells Run-life before and after installing Surface Tubing Rotator (STR).²

As shown on Trend 1, the tubing life was increased to an average of 5.9 times. In some cases, the tubing life surpassed the 8 times mark. Economic metrics resulted in a reduction of their average OPEX of more than \$71,000 per-year/per-well, based on an average 176 days.

Implementing Surface Tubing Rotators is a small Capital Expense, that results in a significant reduction of OPEX, and increasing the run-life of the wells.

¹STR installed between Oct 2014 and Feb 2015

²Data collected from Oil Producer. Updated on Feb 2018