



CASE STUDY

EVALUATION OF AN INJECTION DISTRIBUTION BY **STREAM™** IN HORIZONTAL WATER INJECTOR ENABLED THE OPERATOR TO ASSESS THE EFFICIENCY OF THE CaCO₃ TREATMENT

Location: Middle East

Well type: horizontal water injector

Average injection rate: 1500 bpd

Challenge: to evaluate CaCO₃ treatment efficiency of the horizontal open hole water injection well.

Objective: to assess changes in water injection distribution before and after the CaCO₃ treatment.

Solution: the injection profile evaluation was proposed to be done by the **STREAM™** including T-FLOW and FIND technologies. Such a combination of technologies enables construction of detailed water injection profiles across the horizontal section of the well addressing expected redistribution of injection after CaCO₃ treatment.

STREAM™ (SPINNERLESS TECHNOLOGIES for RELIABLE EVALUATION, ANALYSIS, and MODELING of well-reservoir flow)

A powerful suite of tools and technologies that provide high-resolution and accurate logging capabilities. **STREAM** is an integration of FIND, TFT, and T-FLOW technologies, working in perfect harmony to unlock unparalleled insights into the processes occurring inside and beyond the wellbore.

T-FLOW (Temperature Modeling)

The math solver allows predicting the heat exchange between the wellbore and the reservoir based on hydro/ thermo-dynamic theory and high-resolution temperature data acquired by the High-Resolution Temperature Tool (HRT). The method provides a detailed reservoir production/injection profile for open/cased hole wells with vertical, deviated, or horizontal trajectories.

FIND (Flow Identifying Noise Detector)

A new-generation spectral noise logging tool records data by four channels with different frequency ranges and amplification to signal. It allows to provide detailed full-spectrum acoustic profile without distortion, including wellbore/reservoir flow intervals detailing, fractures localization, leak detection, and flow behind the casing determination.



