# Plato DTS

Interpretive Software for DTS Data

The DTS Data Challenge

Optical fiber data interpretation software goes beyond visualization and qualitative analysis. The capital investment required for DTS means significant value has to be derived from the data provided, so quantitative analysis is imperative.

Plato DTS Data Management

Plato's DTS analysis tool visualizes and interprets DTS and other optical fiber sensor data from both production wells and injection wells. The tool uses an enthalpy balance model which accounts for heat transfer due both to conduction and convection, frictional heating or cooling, skin effects and phase changes in the wellbore.

Plato offers a continual update well monitoring solution - new data is automatically processed and changes in well behavior are directly highlighted.
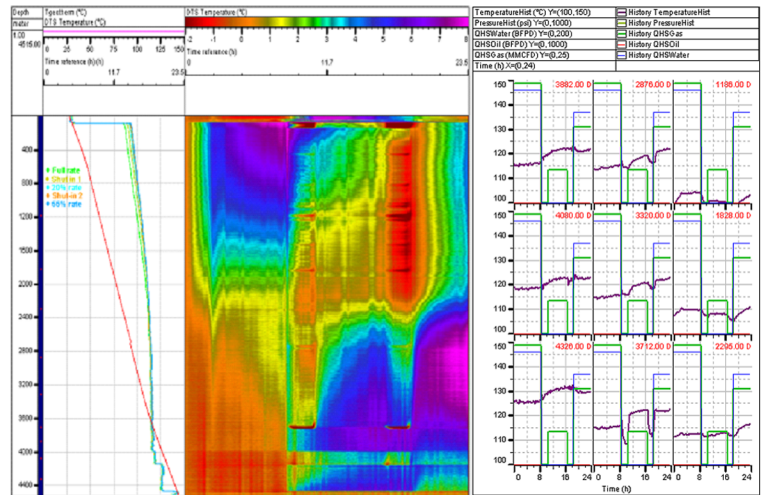

Data management

Fast, dynamic storage in a binary database : all recorded DTS traces are imported into an in-memory binary database. Data is stored in variable size arrays which grow when new DTS traces are added. History information allows efficient retrieval of the DTS traces by time and date.

Data processing

DTS traces, selected by date and time, can be analyzed for the quantitative determination of the production profile. Data provided by other tools (e.g. pressure points) can be combined with the DTS data for multi-phase analysis and improved quality of results. Injection wells with openhole completions can be analyzed using multiple warmback DTS traces.
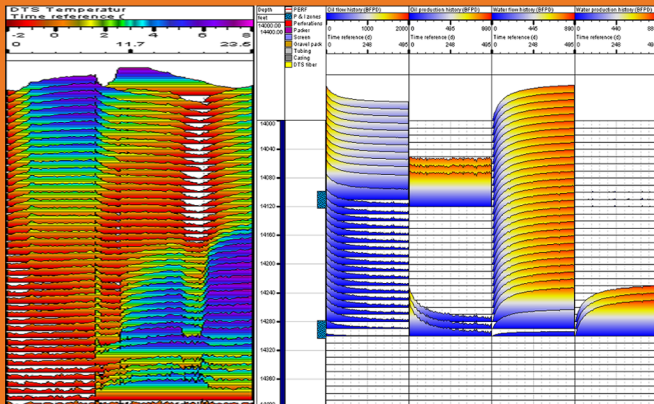
Simulation

This unique feature predicts the feasibility of a DTS interpretation. The study of complex completion scenarios allows determination of whether a DTS system should be deployed or not and if so, predict its sensitivity to phase or rate changes. Combined simulation and analysis improve the DTS technology by early detection of weaknesses in the system.

Visualisations

Multiple visualization modes (incl animation) as a function of depth and time allow qualitative analysis of the data prior to the full quantitative interpretation.

Quantitative Analysis

Plato calculates the production and injection profile from DTS data at a chosen date and time. When combined with holdup data (pressure), multi-phase profiles are computed. Injection wells with openhole completions are analysed using multiple warmback DTS traces.

Permanent Well Monitoring

Data from permanent optical sensor installations are automatically imported and processed. A production profile is displayed in function of time. Changes in well behavior are directly highlighted. Results from the analysis are automatically exported aand reports are generated.