# RMS™

Reservoir Engineering

Is your well producing an unexpected amount of water? Are you trying to decide where to place your next well? Could gas injection be beneficial for your reservoir? As a reservoir engineer, you are well familiar with these questions and challenges. You know that prediction and management of reservoir behavior require close cooperation in a cross-disciplinary team. Uncertainty needs to be consistently handled throughout the whole value chain. The decision making process is complex and requires the best tools available to support the process. RMS™ offers a large suite of tools for reservoir engineers, for building, maintaining and analyzing flow simulation models. RMS will help you understand the reservoir and make the right decisions.

IN SUMMARY

- Build high-quality grids for complex geometries.

- Catch important heterogeneities through industry-leading upscaling techniques.

- Generate well data for flow simulation.

- Update grid and model properties continuously with new data.

- Use streamlines or integrated flow simulation to quality control your model.

- Work seamlessly with industry-standard flow simulators.

- Cooperate closely with other team members in shared environment.

- Handle uncertainty in a stringent manner.

Simulation Model Building

3D grid building in RMS is easily performed based on the structural model. The building process is fully automatic, and the grid can be easily regenerated to fit new information available. Complex geometries associated with normal or reverse faults can be dealt with in the same manner as simple geometries. A large toolkit is available for creating local grids and for manipulating the grid.
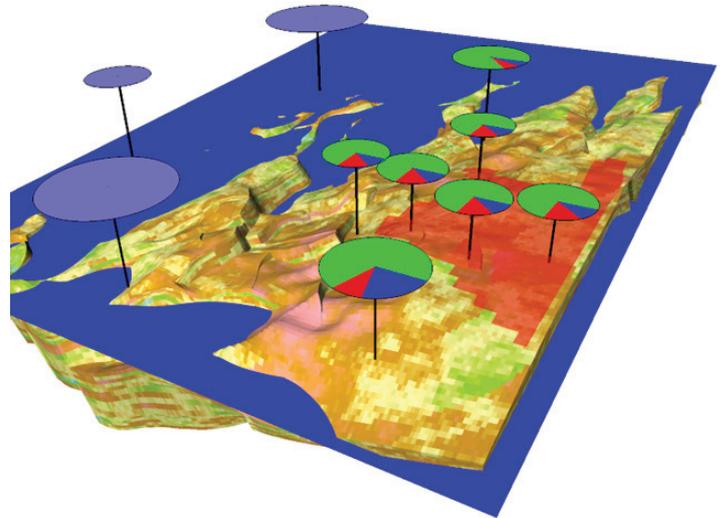

The flow grid can be populated with petrophysical properties using RMS's unrivaled collection of upscaling methods. RMSSimgrid offer a suite of cell-based upscaling techniques, both static and flow-based methods. Novel transmissibility upscaling is available to give maximum accuracy for representation of heterogeneities in the flow model.

Well trajectories, completion data, and grid model can be combined as input to generating well data for flow simulation. Export functionality is available to transfer the model to industry standard flow simulators.

Dealing with Uncertainty

History matching and prediction requires generation of many alternative models. With RMSUncertainty you can represent uncertainty throughout the whole modeling chain. Models can be generated where structural and petrophysical parameters are varied in a manner consistent with all observations. In combination with a flow simulator, both static and dynamic uncertainties are captured. The assisted history-matching tool Tempest ENABLE can give additional support in the process of finding models that matches dynamic observations.
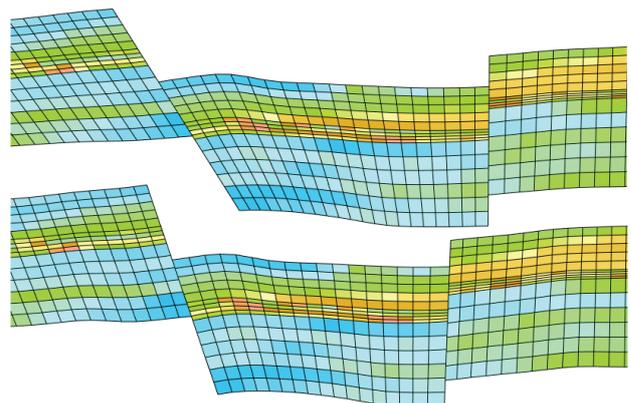
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Model Maintenance

Models are often difficult to maintain and keep in sync when new information about the reservoir is gained. RMSLocalUpdate offers tools to perform local modification of both grid and grid properties to match new information.   No manual editing is required and the work process can be executed automatically in RMS's unique workflow manager. With RMS, maintenance overhead is significantly reduced.
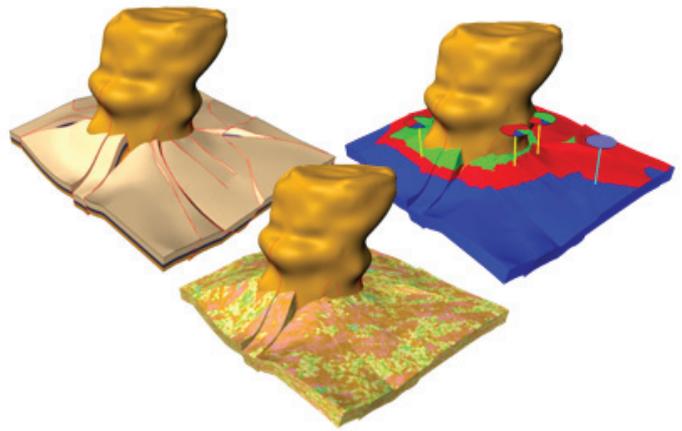
To learn more please visit www.roxarsoftware.com or email us on rss.marketing@emerson.com.

Dynamic Data Analysis

A flow simulation performed in an external simulator is easily imported back into RMS, for further analysis. The integrated platform makes it possible to analyze static and dynamic data in the same environment, promoting cross-disciplinary cooperation. A rich toolkit for data analysis and for conversion between data types makes RMS the ideal platform for combined analysis of seismic data, geological data, and dynamic data.

Dynamic Modelling

With RMSStream, you can use streamline simulations to quality control the result of upscaling or to investigate flow compartments in the reservoir. A fast streamline engine makes it possible to also run streamline simulations on the geo model. Integrated flow modeling in full black-oil mode can also be performed using RMSFlowsim.

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MAXIMUM RESERVOIR PERFORMANCE

EMERSON™
Process Management