New features in ResInsight

Opm Meeting 24.01.2019

Magne Sjaastad

Ceetron Solutions AS

Presentation

- ## Main developers of ResInsight

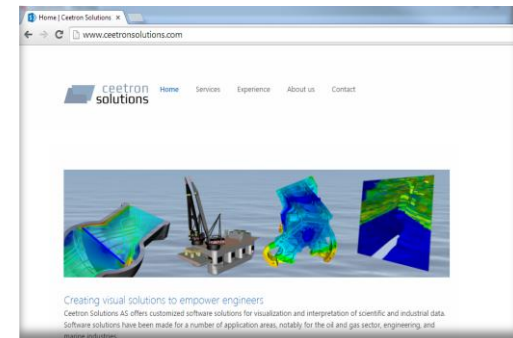 Gaute Lindkvist   Jacob Støren   Magne Sjaastad

- ## Ceetron Solutions AS
  - Founded in 2013
  - Spin-off from Ceetron AS
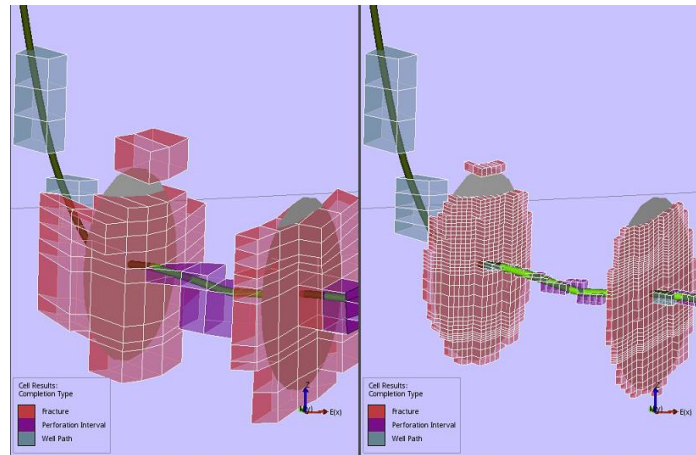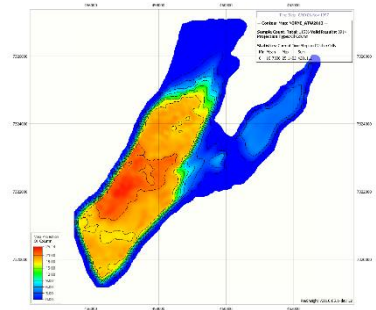 - Scientific visualization

www.ceetronsolutions.com
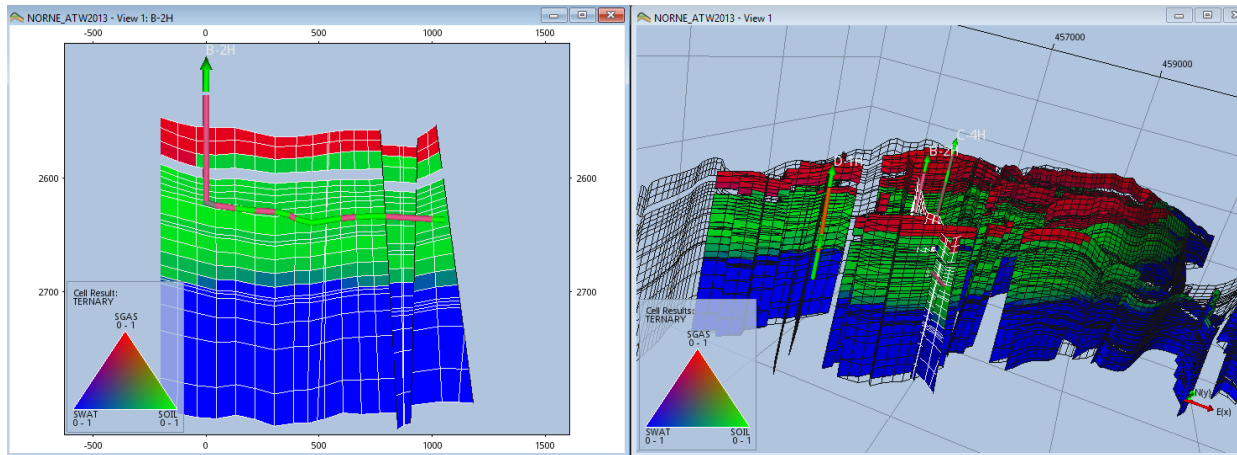
Creating visual solutions to empower engineers

Agenda

- New Features in ResInsight
- Live demonstration of selected features
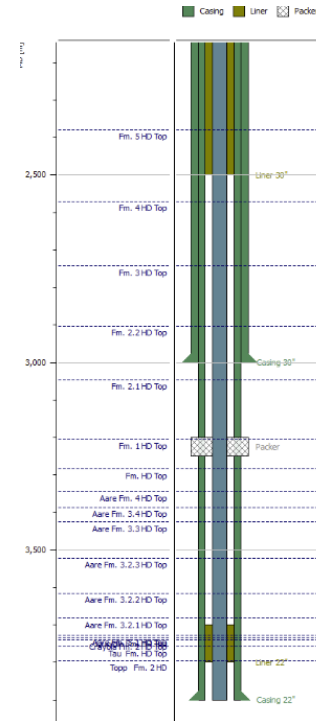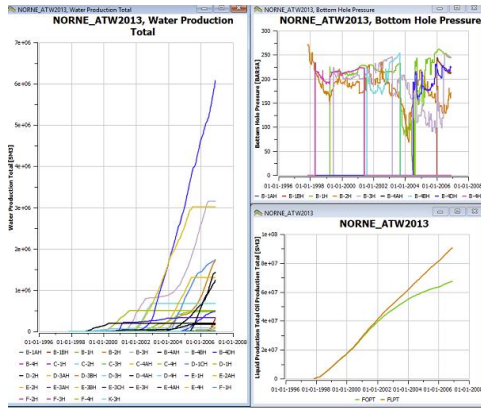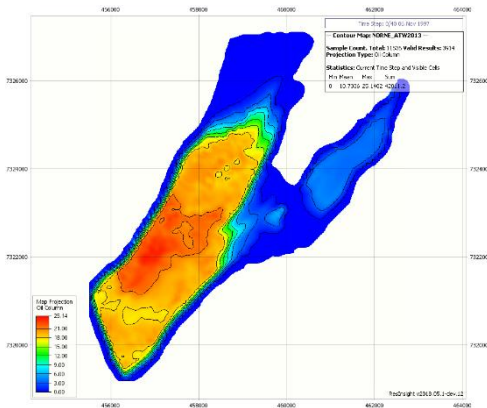- Current projects and plans

Visualization

- Main grid with subgrids (LGRs)

- Simulation wells, Faults, Well paths

- Non-neighbor connections (NNCs) with data

- Geomechanical models (ABAQUS)

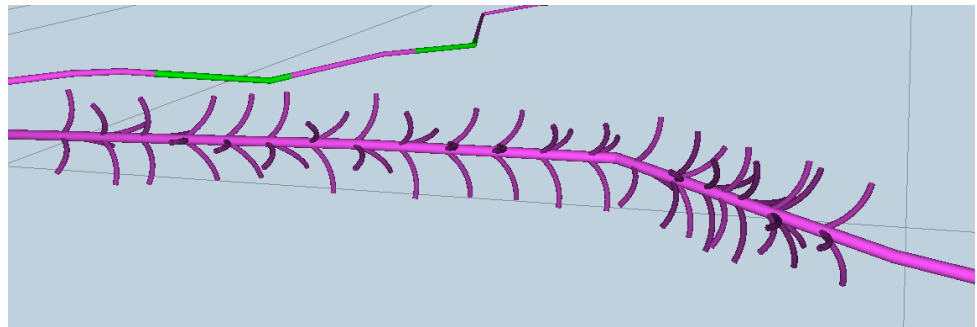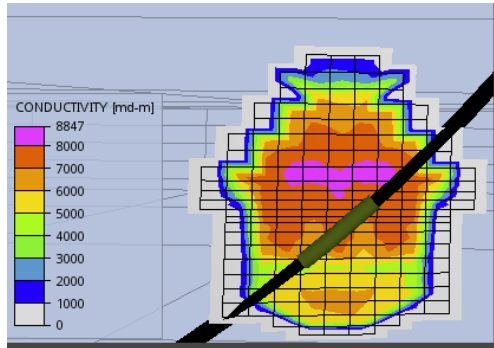- Flow-Diagnostics module (library implemented by SINTEF)

Plotting

- Summary plots
- Ensemble plots
- Well log curves
  - Plot data imported from file
  - Plot data for curves extracted along well path
- RFT/PLT data
- Casing Design with Completions
- Contour plots

Computations and preprocessing

- Interface to octave

- Modelling and preprocessing of hydraulic fractures and fishbones

- Completion transmissibility data
  - Compute transmissibility factors for grid cells
  - Export to text file (COMPDAT)

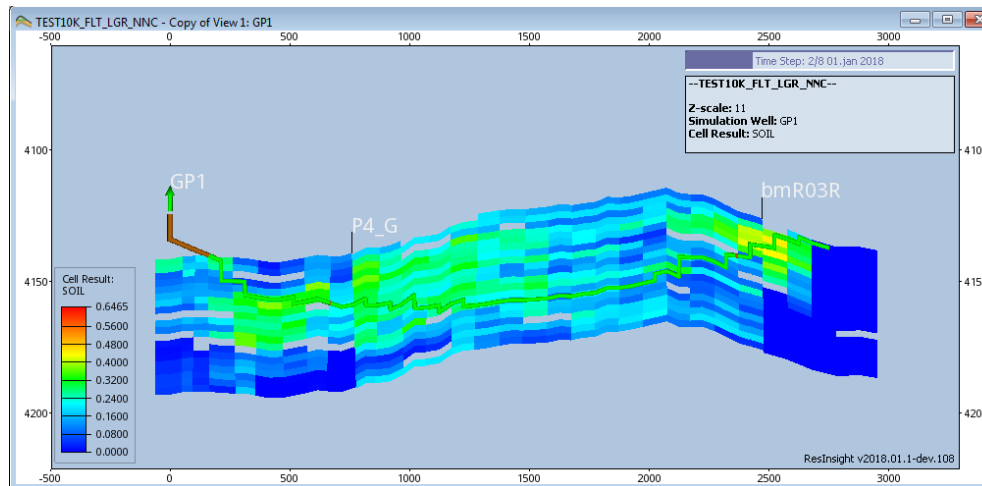- Workflow for creation of new well paths
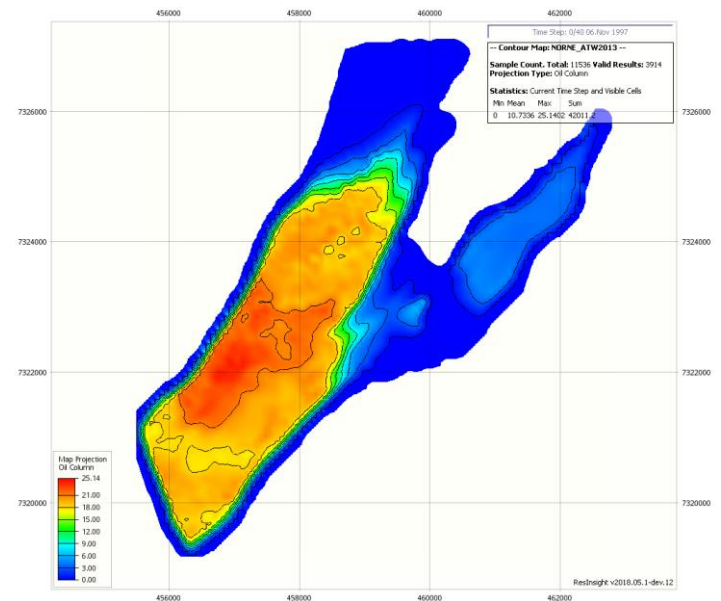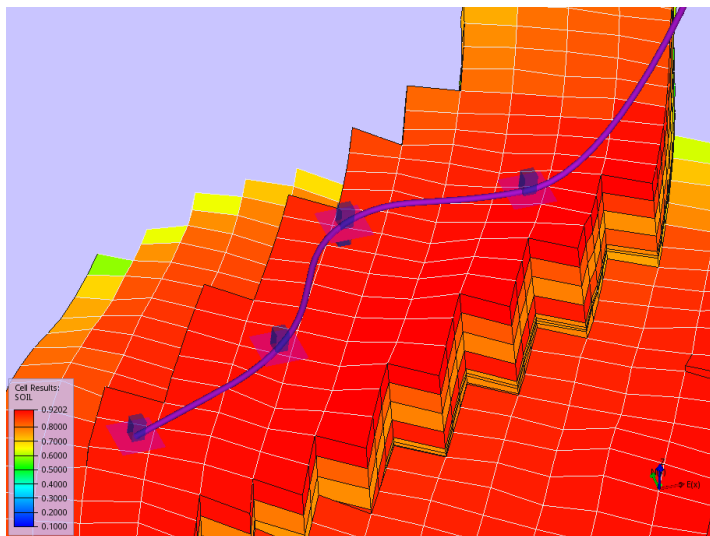
LIVE DEMO

NEW FEATURES 2018

New Features 2018.05

- 2D intersection view
- 3D Well Log Curves
- Support origin restart file
- Ensemble management and plotting
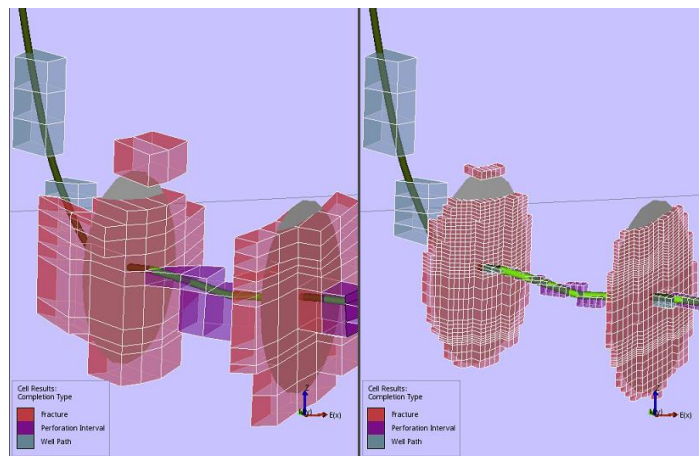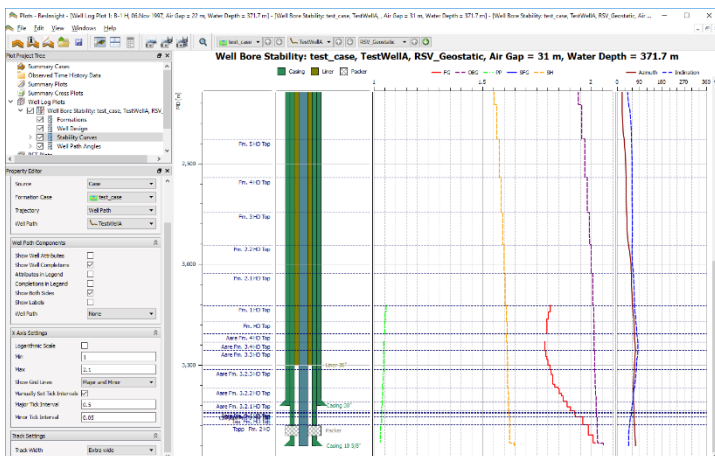- Visualization of well connection factors

New Features 2018.11

- Well path creation
- 2D contour maps
  - Computation and display of oil/gas column
  - Aggregations based on length or volume
  - Aggregation based on user-defined weighting property

New Features 2018.11

- Completions
  - Easily create multiple fractures along well paths
  - Support export of completions based on perforation intervals

- Creation of new local grid refinement(LGR)
  - Create new LGRs based on main grid cells intersected by completions
  - Export of CARFIN for generated LGRs
  - Export of COMPDATL for generated LGRs

- Well Bore Stability Plots and Casing Design
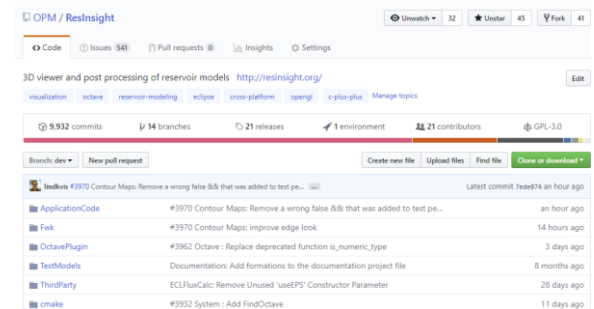
CURRENT PROJECTS AND PLANS

Current Projects

- Maintenance Agreement
  - System related issues
  - General bugfix and improvements

- Development project for new features
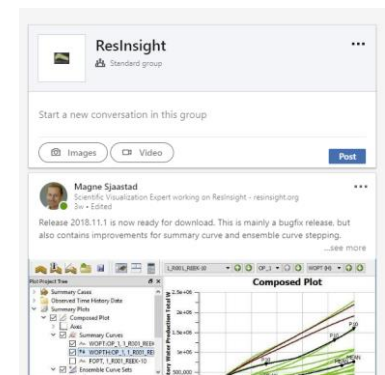 - Migration to Qt5
  - Phyton scripting

Feedback and opportunities

- Project financed by Equinor

- Feedback and suggestions for changes are welcome

- Report bugs and issues at GitHub

- Join ResInsight on Linked in to get updates

References

GitHub	https://github.com/OPM/ResInsight/issues
LinkedIn	https://www.linkedin.com/groups/12167660/
Documentation	https://resinsight.org/