

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



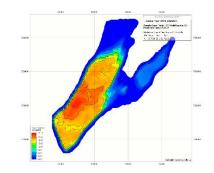
www.ceetronsolutions.com

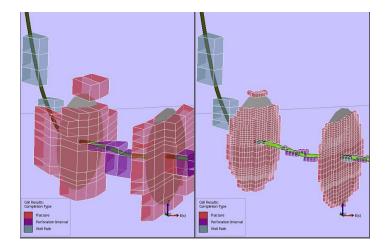
Creating visual solutions to empower engineers



Agenda

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

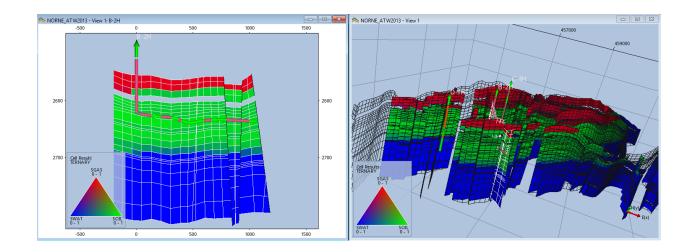






Visualization

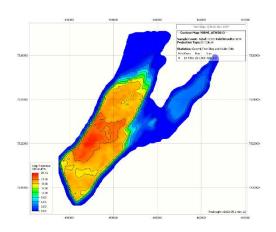
- Main grid with subgrids (LGRs)
- Simulation wells, Faults, Well paths
- Non-neighbor connections (NNCs) with data
- Geomechanical models (ABAQUS)
- Flow-Diagnostics module (library implemented by SINTEF)

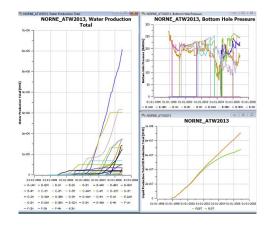


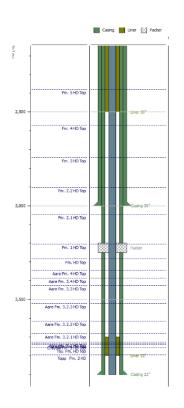


Plotting

- 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



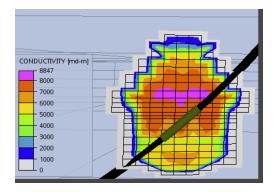


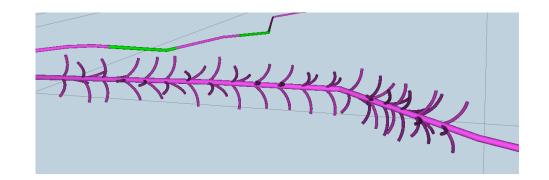




Computations and preprocessing

- 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

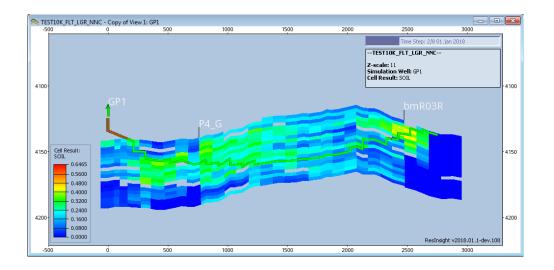


NEW FEATURES 2018



New Features 2018.05

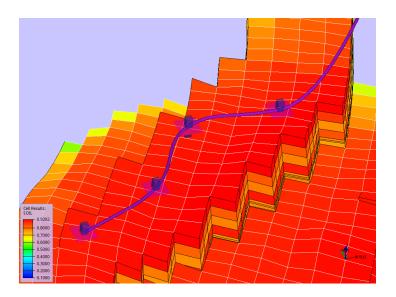
- 2D intersection view
- 3D Well Log Curves
- Support origin restart file
- Ensemble management and plotting
- Visualization of well connection factors

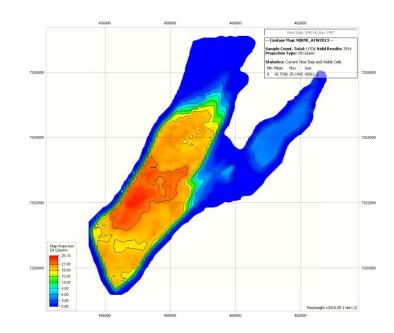




New Features 2018.11

- 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

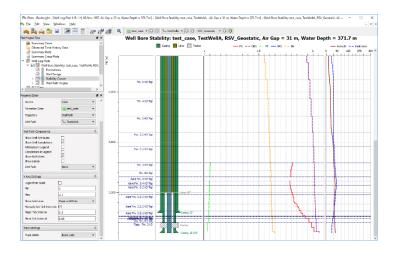


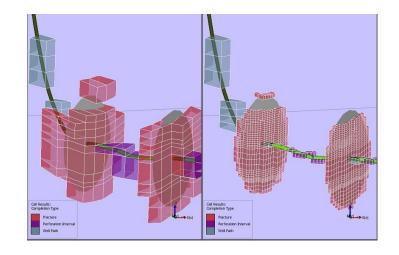




New Features 2018.11

- 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

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References

GitHubhttps://github.com/OPM/ResInsight/issuesLinkedInhttps://www.linkedin.com/groups/12167660/Documentationhttps://resinsight.org/