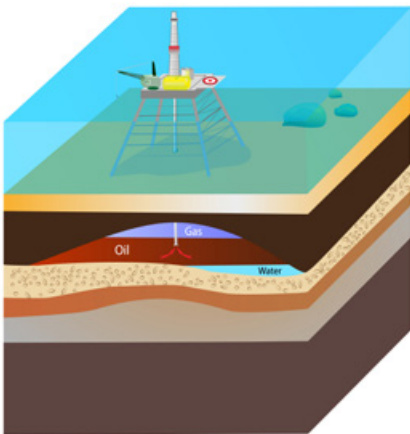


Highlights

- Captures best practices in the Mechanical Earth Modeling and associated post-processing
- Provides accurate FE representations of subsurface geology
- Automates repetitive model building tasks and complex post-processing calculations
- Flexible framework allows to extend to advanced analyses such as design exploration
- Reduces the geomechanic model building time by about 70%

Ideal for Organizations that:

Routinely conduct numerical Geomechanic simulations such as rock mechanics and Geology teams in Oil and Gas companies.



Geomechanics Director

Expedites Mechanical Earth Modeling & Decision Making

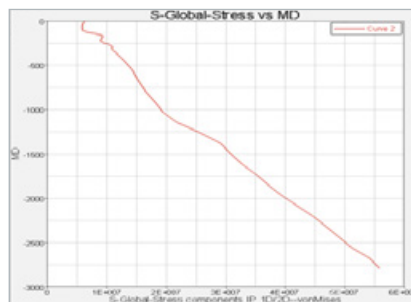
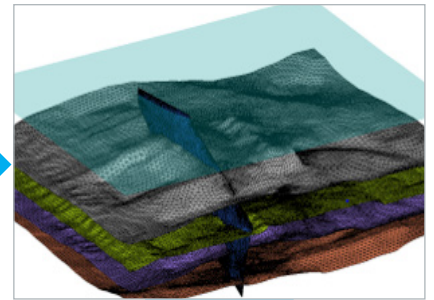
Altair's Geomechanics Director (GeoD) allows engineers and scientists, especially in the Rock Mechanics and Geology groups at Oil and Gas companies, to build finite element models from subsurface geology quickly and efficiently. Fully integrated into HyperMesh, this user-friendly solution provides process guidance and a semi-automated approach for importing tessellated surface geology, cleaning up the model, organizing stratigraphically, assigning properties and creating boundary conditions.

In addition, the GeoD also offers a variety of post-processing tools to study near-wellbore and field wide effects for efficient recovery of hydrocarbons. The use of GeoD should help minimize the financial and environmental risks associated with Oil exploration and extraction.

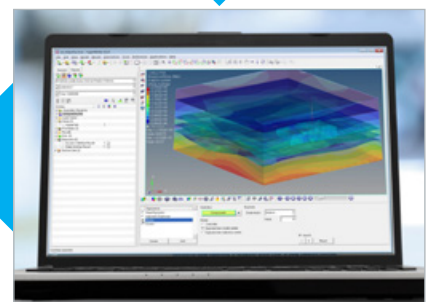
Seismic Data



Sub-surface Geology

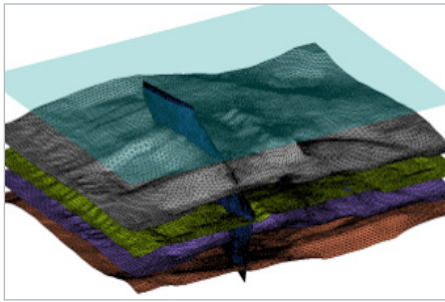


Efficient Well Drilling

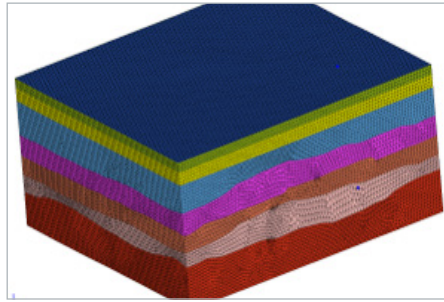


MEM & Simulation

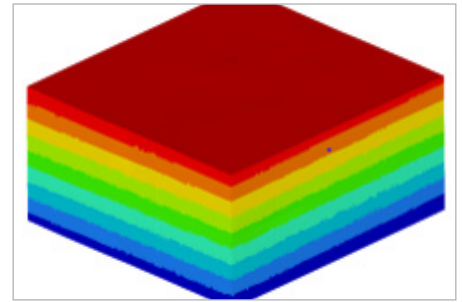
The GeoD can take a 2-3 month model building process down to 3-4 weeks - increasing the productivity and efficiency of Oil & Gas companies.



Sub-surface geology



Volume meshed layers



Stress results

Key Features

A tailored pre & post solution for the Geomechanics community. The GeoD offers process guided workflow to start from subsurface geology and prepare the model for Numerical Geomechanics simulations. The solution also offers comprehensive set of tools for geomechanical results visualization, results mapping and 1D plots for wellbore stability issues.

Geomechanics Director Pre-processing Capabilities:

- Mesh cleanup to establish mesh connectivity
- Semi automated sidewall creation
- Organization by stratigraphic history of the given geology and fault network
- Tetmesh generation
- Materials and properties
- Contacts and constraints
- Export solver input file

Geomechanics Director Post-processing Capabilities:

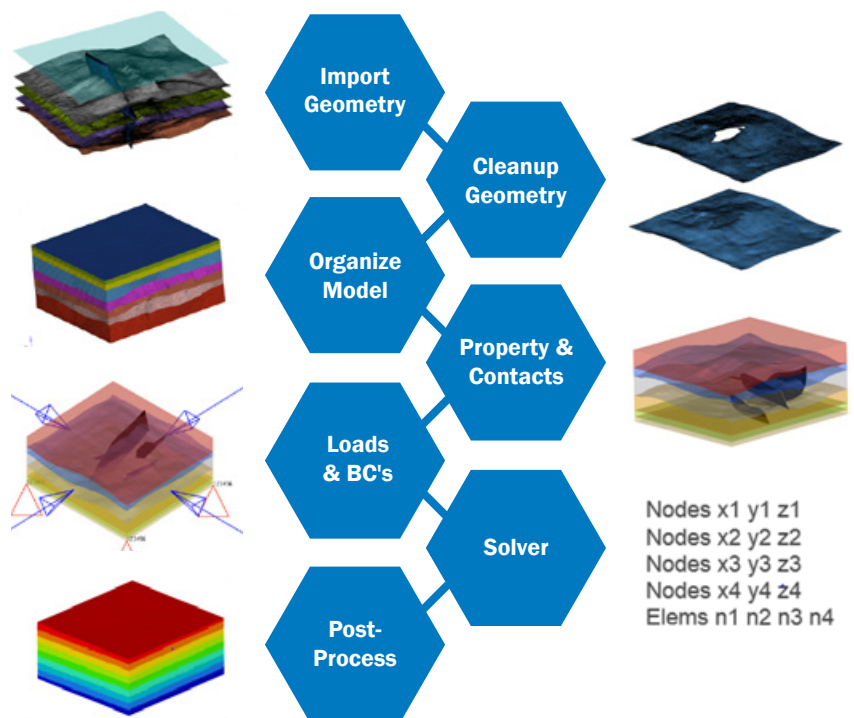
- Result visualization
- Base results interpretation
- Deriving stress based metrics
- Mapping results from 3D to 2D/1D elements
- Capability to plot well stresses along measured depth
- Results export for subsequent analysis
- Result propagation and persistence through H3D files for next stage analysis

Deployment:

Altair's team will work with you to understand your unique working practices and ensure that our Geomechanics solution meets your specific requirements.

Our experts support the following:

- Understand your current methods of mechanical earth modeling
- Align the GeoD base module accordingly
- Determine configuration needs if any for customer specific processes
- Provide quick start focused support
- Periodic checkpoint assessments to ensure a successful user experience



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Altair's Enterprise Software and Solutions division helps companies to solve business and engineering problems at the desktop, team and enterprise levels. We work closely with our clients to increase organizational efficiency and decision-making by building solutions that are tailored to their unique environment and processes. These solutions include: cloud-based simulation and high-performance technical computing, CAE workflow automation, and specialized data analytics applications.