SEEQUENT



leapfrog | GEOTHERMAL

See inside your reservoir with Leapfrog Geothermal

Make clear and confident decisions for geothermal development and operations

Seequent, a Bentley Company

Tools and workflows tailored for geothermal experts

Leapfrog Geothermal is an intuitive, workflow-based 3D subsurface modelling software that enables you to build and refine models – fast.

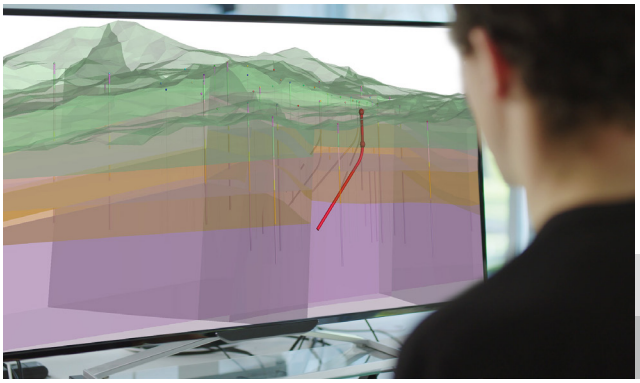
Make intelligent decisions about your resource with well targeting, numerical modelling, and reservoir simulation in a single 3D model

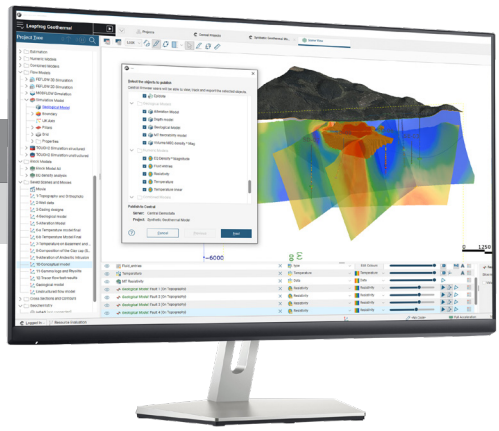
User-friendly tools and processes streamline data and empower collaboration so you can:

Optimise geothermal wells

Make confident decisions on well targeting and operations. Rapidly build and test well trajectories and prognoses in 3D based on your subsurface models, ensuring you're always working with the latest information.

Add new data or make changes to a model to dynamically update all dependent models. Gain insights to change the trajectory of wells as you drill them as soon as the latest data becomes available.





Reduce risks

Understand and communicate the complete picture of your geothermal resource with 2D and 3D visualisations.

Create movies, share slices, and add annotations to explain your ideas. Use visuals to clearly communicate insights with other teams and non-technical stakeholders – to generate conversations and make well-informed decisions.

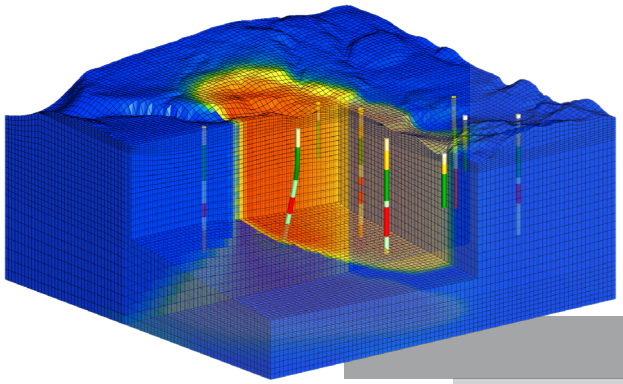
Quickly view new data in 3D to inspire ideas and iterations. Overlay topography to put your subsurface data in context.

Unite geology, flow, and numerical models

Eliminate silos and create a continuous workflow between teams. Bring all geoscience data into a single environment through direct integrations with industry-leading reservoir engineering and geophysical software.

Quickly build conceptual models from various data types, such as GIS, cross-sections, flow, geophysics, geology, wells, and more, in a multidisciplinary environment.

Leapfrog Geothermal interfaces with industry leading reservoir engineering and geophysical software for rapid interpretation of geothermal reservoirs.



Spend time on decisions, not crunching data

Build dynamic, conceptual models that combine geology, geophysics, and reservoir engineering insights.

Leapfrog Geothermal features and workflows bring your teams and data together with:



Geological modelling

Gain an in-depth 3D understanding of local geology to make decisions on well planning and optimisation.

- Rapidly build complex geological models from wells, points, polylines, and meshes
- Define a surface chronology to determine the stratigraphy of your reservoir as well as faults and complex fault systems
- Model planar and volumetric surfaces, veins, and stratigraphic sequences
- Dynamically update models when the base data are updated



Visualisation

Analyse your data and look for correlations and patterns with simple, intuitive visualisation tools. Share insights across disciplines and help non-technical stakeholders make more informed decisions using 2D and 3D models.

- Visualise TOUGH2, TETRAD, MODFLOW, and FEFLOW flow model time-dependent data in 3D
- Co-visualise multidisciplinary data including wells, geophysical data, geological, numeric, and flow simulation models
- See inside your model by dynamically slicing through your models in 3D with control over transparency
- Create dynamic cross-sections through key parts of your resource
- Build a scene using multiple models to showcase relationships



Well planning

Anticipate subsurface permeability and key reservoir conditions by testing and refining a 3D geological model.

- Target wells in an interactive 3D environment
- Plan well trajectory with multiple build and/or hold sections
- Peer review and prognose models
- Export planned trajectory and prognoses
- Change the trajectory of wells in real-time



Flow Simulation

Create flow simulation models from your geological and numeric models quickly, export them for simulation runs, and then import the results back into Leapfrog Geothermal.

- Easily build TOUGH2, MODFLOW, and FEFLOW models and keep them up-to-date
- Import TOUGH2, TETRAD, MODFLOW, and FEFLOW models for visualisation of time-dependent results
- Create TOUGH2 models with either structured or unstructured grids
- Assign combined lithological and fault rock types to TOUGH2 models
- Create a reservoir simulation model with a corner point grid geometry aligned to the geological model
- Evaluate numeric models on to the simulation grid and export in ECLIPSE™ or CMG™ format



Numeric modelling

Easily build block models in 3D and keep them up-to-date.

- Leapfrog Geothermal's powerful interpolation engine lets you easily build interpolants from wells and points.
- Quickly visualise isosurfaces for parameters such as temperature, pressure, geophysics and geochemistry
- Incorporate complex anisotropies
- Build multi-domained numerical models
- Export interpolant volumes, isosurfaces, and midpoints
- Assign properties to blocks

Add on Leapfrog Edge to integrate geostatistical analysis into your geothermal workflow.



Sharing and collaboration

Create a continuous workflow between teams to build fast, rapid iterations of conceptual models.

- Share your work with anyone in the organisation using cross sections, renders, scenes, and movies
- Set up and save 3D scenes that illustrate important aspects of the model for use in reporting and annotate them with further information
- Easily define cross sections, serial sections, and fence sections in the 3D scene



SEEQUENT

A better understanding of the earth
creates a better world for all

seequent.com

Seequent, a Bentley Company

phoenix
GEOSYSTEM INDONESIA

Company Name PT. Phoenix Geosystem Indonesia

Address : Rasuna Office Park, 2nd Fl, Unit GO-01
Jl. HR. Rasuna Said Jakarta 12960 Indonesia

Website : www.phoenix-geosystem.com

Email : info@phoenix-geosystem.com