3D geological modelling

Understanding the third dimension is a key factor for exploration planning and resource estimation. SRK is at the forefront of 3D geological modelling and applies the most advanced techniques to generate models that will improve the comprehension of your project geology and identify the next target.

**Exploration**

3D modelling is an indispensable tool for exploration from grass roots to brownfield stage. SRK can assist with 3D compilation of available data to improve targeting and drill planning in grass roots projects; preliminary 3D models to understand trends and controls on mineralisation, improving infill and extensional drill planning.

In addition, SRK provides integrated 3D geological models to improve the understanding of the geology and move with confidence towards resource definition. We can also show near mine exploration using 3D targeting to generate new targets and extend the life of the mine.

**Resource Definition**

A reliable resource estimate depends on a robust 3D model. Integrating our structural and geological interpretation with advanced 3D modelling techniques, SRK can construct the best model of your deposit in a time and cost-effective manner. This will then improve constraints and confidence of your resource estimation.

Our 3D modelling team works closely with our resource geologists and statisticians for a flow less transfer of information into the resource estimation.

**Mining**

Distribution of physical properties of rocks is controlled by the position of lithologies in space and by presence of structures such as folds and faults that can alter substantially the original rock properties.

SRK’s integration of structural geology with rapid 3D modeling techniques allows a more reliable interpretation of the distribution of geological units and superimposed structures, improving mine design, geotechnical and hydrological studies.

**Our services**

- Deposit, district and regional scale 3D geological modelling
- Near mine and regional 3D targeting
- Geological modelling for resource estimation
- First pass grade modelling
- Review and integration of existing models
- Unconstrained and geologically constrained geophysical inversion modelling
- 3D modelling training
SRK’s 3D geological modelling specialists (Australia)

**Ben Jupp**  
Senior Consultant, Geological Modelling  
- 3D modelling  
- Structural geology  
- Basin analysis  
- Geophysical analysis  
- 3D exploration targeting  
- Structural mapping  
- GIS

**Mathew Davies**  
Consultant, Geology  
- 3D modelling  
- Geostatistics  
- Structural geology

**Sarah Monoury**  
Consultant, Geophysics and Resource Geology  
- 3D modelling  
- 3D geophysical inversion modelling  
- Resource modelling  
- Geostatistics  
- Geophysics processing and interpretation

**Lucas McLean-Hodgson**  
Consultant, Geology  
- 3D modelling  
- Seismic interpretation  
- Structural geology

**Software Packages**  
Our specialists have expertise in:  
- Datamine  
- Leapfrog  
- Gems  
- GOCAD  
- GOCAD-SKUA  
- UBC  
- VPmg  
- Vulcan  
- Minex  
- Kingdom  
- Zetaware

---

**Our approach**

The SRK 3D modelling team combines geological and structural interpretation with the most advanced 3D modelling software to build realistic geological models in a short timeframe. Implicit modelling techniques, provided by software such as Leapfrog, GOCAD and Geomodeller, allow SRK’s geologists to use a flexible approach where multiple models can be generated and what-if scenarios assessed in hours or days instead of weeks or months of the traditional, section based, point and strings interpretation. This innovative approach preserves the 3D consistency of the data and its integration with traditional data validation and analysis reduces the uncertainties (and hence the risks) associated with the model development.

For more information or to request a no-obligation meeting with us please contact:  
**Ben Jupp** on +61 3 8677 1901 or bjupp@srk.com.au

---

SRK Consulting provides a comprehensive range of specialised services to the mining, exploration and financial industries. With over 1500 staff members in 45 offices on 6 continents we bring a truly global perspective to your unique requirements. For further information, please visit our website www.srk.com.au For more information please or contact us at info@srk.com.au