

# Structural Geology

**Structural Geology** is the study of the three dimensional distribution of rock units with respect to their deformational histories. Many mineral deposits are controlled by structural features and can be affected by post-mineralisation events such as folding and faulting or the influence of late stage fluid-flow.

The field mapping, interpretation and understanding of structures at a regional and licence scale is therefore a fundamental part of any exploration programme. Understanding the development of structures ('kinematic analysis'), and the forces responsible ('tectonic events'), is key to recognising which geometries to expect and their relative timing to the mineralising events, in order to guide exploration.



## SRK ES offers:

**Experience** in many projects that, due to their complexity, require specific structural understanding. These include gold, iron ore, chromite, oil shale and rare earth element (REE) projects in Sierra Leone, Ethiopia, Liberia, Jordan, Turkey and Laos. These commodities are associated with greenstone belts, ophiolites and igneous intrusions.

**Knowledge** of geological structures which most often form the plumbing system associated with different deposit models, their identification in remote sensing data, outcrop and drill core; and the implications of these structures for exploration programme design. SRK ES can also call upon experts from the wider SRK Group to develop 3D structural models required for future stages of a project such as Mineral Resource Estimation and geotechnical and hydrological modelling for pit design.

SRK ES can provide dedicated geoscientists to amalgamate and interrogate datasets in order help define the controls on mineralisation within a particular deposit type. SRK ES is able to provide a fresh perspective on a particular structural issue and draw on the experience and knowledge gained from similar deposits.

**Expertise** in the collection of structural data through the mapping of outcrop, pits, trenches, underground workings and from orientated and unorientated drill core. The collation of this data with historical measurements and the subsequent integration with lithological, geochemical, geophysical and remote sensing information enables the development of a sound structural model.

**Innovation** in structural mapping and interpretation with a strong emphasis on the relative timing and relationships between structures, rock units, alteration and mineralisation. The resulting integrated geological map and 3D model can then be continually interpreted, tested and amended as the exploration programme develops and new structural data is collected.

To find out more about our technical services or discuss your project specific needs, please contact us;



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