

PROJECT DESCRIPTION

LKAB

Kiirunavaara Mine, Sweden

Mining-induced seismicity is one of the most serious rock mechanics problems in sublevel caving in the LKAB mine in Kiruna.

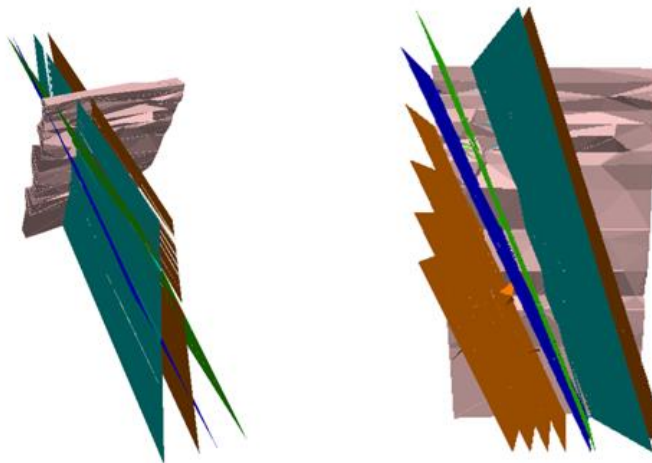


ITASCA'S ROLE

In this project, alternative mining sequences for a portion of the mine have been simulated using a three-dimensional numerical model. Large-scale geological structures have been explicitly included in the model to simulate the occurrence of "fault slip" type seismic events. Calculations have been conducted using 3DEC.

PROJECT RESULTS

The results have been used to recommend a mining strategy for future extraction in this portion of the mine to (as far as possible) minimize mining-induced seismicity.



Model of a portion of the Kiirunavaara orebody including large-scale geological structures