Geotechnical and Rock Engineering is one of numerous technical disciplines offered by SLR across the globe. The core of the SLR African Operations’ Geotechnical Engineering team is located in Johannesburg, South Africa.

SLR’s team of dedicated geotechnical engineers provide geotechnical engineering services for the design of underground mines. We provide designs which are practical and cater to the needs of the preferred underground mining method, while ensuring the safety of all mine workers and improving the economics of the project.

HOW SLR CAN HELP

SLR’s experienced team of Geotechnical and Geological Engineers can provide the necessary expertise in terms of:

• Geotechnical underground studies including the design and implementation of field investigation programs including, geotechnical data collection, mapping, drilling, logging, sampling and testing
• Intact rock and rock mass characterisation
• Virgin in-situ stress measurement and pillar stress measurement
• Stability analysis for stopes, pillars, and mine access including ground support & reinforcement, and numerical modelling
• Design and support recommendations for the long-term stability of permanent underground facilities
• Assessment of the interaction between surface and underground mining operations
• Likelihood of caving and associated surface subsidence
• Investigation of hydrogeology, ground water inflow and drainage rate
• Design and installation of underground monitoring systems and assessment of results

SLR CAPABILITIES

SLR’s service offering provides for:

• Stope design and stope optimisation
• The selection of mining methods which are evaluated from a geotechnical viewpoint
• An assessment of expected mining conditions and ground control problems for the mining operation
• Application of design and support recommendations for expected mining and ground conditions
• Design and implementation of depressurisation and dewatering systems
• The design and implementation of underground monitoring systems
• Risk and hazard identification
• Development of ground management plans and codes of practice