Underground Geotechnical Services

Underground Geotechnical Capability
- Conceptual, scoping, pre-feasibility and feasibility studies e.g. Cibaliung (Indonesia), Tomingley (Australia), Angas Place (Australia)
- Underground ground support design, stability analysis
- Numerical stress analysis in linear-elastic and non-linear codes, including Map3D, Abaqus, 3DEC and FLAC 3D (Peak, St Barbara, Northparkes)
- Excavation monitoring design using state-of-the-art systems
- Geotechnical reviews and audits (e.g. Henty, Stawell, Angas Place)
- Stability assessment of stoping areas, stoping sequencing advice
- Ground awareness training
- Geotechnical data collection - core logging and underground mapping (training or actual work)
- Ground support review and optimisations to assist in achieving faster development rates
- Stress measurement programs and stress monitoring
- Seismic monitoring, analysis and data review
- Dynamic ground support design (for seismic conditions)
- Operational support and mentoring of junior engineers
- Ground support audits
- Extensive portal and boxcut design
- Shaft assessment and design

Example Projects by Mining One Personnel
- Bendigo Mining Limited (Australia): Ground support design, operator training, operational geotechnical support, shaft construction supervision, long term involvement
- Victor South, Long Shaft (Australia): Numerical modelling, including room and pillar designs, stoping guidelines and sequencing
- Lepanto (Philippines): Assessment of shaft instability including 3D stress modelling
- CSA Cobar mine (Australia): Stopedesign and sequencing, including 3D stress modelling
- Plutonic gold mine (Australia): Operational Senior Geotechnical Engineer role
- Tomingley (Australia): Geotechnical component for feasibility study
- Stawell gold mine (Australia): Operational support, ground support design, project assistance as required, long term involvement
- Tritton Copper (Australia): Ground support and pillar designs as well as feasibility studies
- Numerous Portal Designs completed, including A1 gold mine, Fosterville, Hera Gold Project (various states in Australia)
- Mt Wright, Peak and Mt Morgans (various states in Australia)
- Shaft design and peer reviews e.g. Pike River, Solid Energy (New Zealand), Cibaliung (Indonesia), Peak gold mine, Bendigo Mining, Stawell gold mine and Ballarat (Australia)