

SCT Helps Build Strong Relationships With Mining Clients



SCT Operations has been providing specialist geotechnical services and solving difficult mining problems for well over 30 years.

The company's four pillars, consulting, field services, instrumentation and research, combine to enable them to support mining operations to manage geotechnical and strata control risks, optimise efficiencies, and mitigate impacts to the environment.

The company has a clear Mission to provide world-leading geotechnical solutions, based on the observation, measurement and understanding of underground rock be-

haviour, that deliver value to our clients and inspire our people.

SCT's Vision to be the best provider of advanced geotechnical solutions to the global underground mining industry has seen it build a long-standing relationship with South32's Illawarra Metallurgical Coal (previously AIS, BHP Collieries, Endeavour Coal Illawarra Coal) dating back to March 1989.

Throughout the years, SCT has provided a wide range of services and products. In fact, IMC has utilised SCT's consulting, field services, instrumentation and partnered with SCT in research projects. The broad national and international experience in a vast array of complex mining environments enables SCT to provide high level advice to assist IMC and their other clients with managing their geotechnically challenging environment.

As a consulting specialist, SCT provides ongoing geotechnical advice and consulting, including operational support and the provision of operational underground engineers at times. The knowledge within SCT's workforce and systems with regards to local mining is extensive and is bolstered by their strong record for retaining long term

employees. With three employees exceeding 30 years of tenure and many others with over 15 years with SCT, the in-house knowledge is unique.

SCT continues to support IMC's operations through a variety of field services including permeability testing, stress measurement and the installation of strata monitoring instrumentation. These services assist IMC by providing accurate data to be utilised as inputs in planning and operations.

SCT supplies monitoring instrumentation locally and internationally. These instruments are installed by the mine and provide ongoing monitoring of strata and early warning of strata changes.

Throughout the decades there have also been a number of opportunities to collaborate with Illawarra Coal on research and ACARP projects.

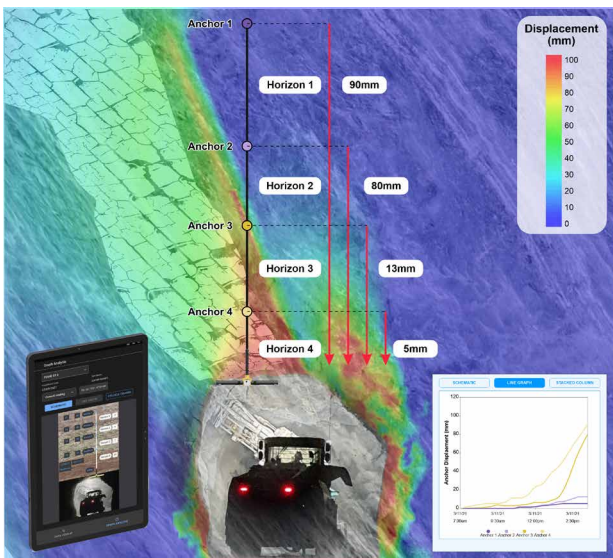
Today, SCT continues to service clients around the world, providing innovative solutions in complex environments to support mining operations. SCT is guided by industry and market demands and continues to improve their systems and capabilities in a range of areas. Some examples include developments in:

- 3D modelling capabilities - SCT have

partnered with ITASCA and Amazon Web Services (AWS) for increased computing power which enables large scaled and detailed rock failure models.

- Stress measurements - SCT continue to develop and improve their systems using the overcoring technique to conduct 3D stress measurements from surface. Recent developments saw them achieve a new record of a high confidence measurement almost 1170 metres deep.
- And the latest SCT innovation for monitoring roof conditions in underground mines is called RockSHIELD®. RockSHIELD® uses IoT integration and the mines WiFi network to connect an array of smart instruments to a central head unit to enable shear and displacement data to be recorded and reported into dedicated software. The software can be configured to set alert levels and provides critical information to the mine enabling them to monitor, act and protect their people, plant and operations.

SCT is proudly founded in Wollongong with team members and offices in Queensland, Victoria and New Zealand. **AMR**



Remote Monitoring of Roof Conditions in Underground Mines

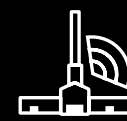


SCT's RockSHIELD® allows monitoring of ground behaviour without being in close proximity of a potential hazard

- ✓ Measure into the rockmass to define the extent and mode of ground failure
- ✓ Connect an array of smart instruments
- ✓ Monitor and record shear and displacement data
- ✓ Cost Effective
- ✓ Easily installed
- ✓ Reusable and scalable
- ✓ Complimentary to LiDAR and other convergence data
- ✓ IoT integration and Wi-Fi connectivity
- ✓ Intuitive software and user interface
- ✓ Data analysis in tabular or graphic formats
- ✓ Configurable alert thresholds



GEOTECHNICAL CONSULTING



GEOTECHNICAL INSTRUMENTATION



GEOTECHNICAL FIELD SERVICES



GEOTECHNICAL RESEARCH

SCT has been providing world-leading geotechnical solutions to the global underground mining industry for over 30 years.



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