SGME | Engineering new environments

CAPABILITY STATEMENT

SUBJECT

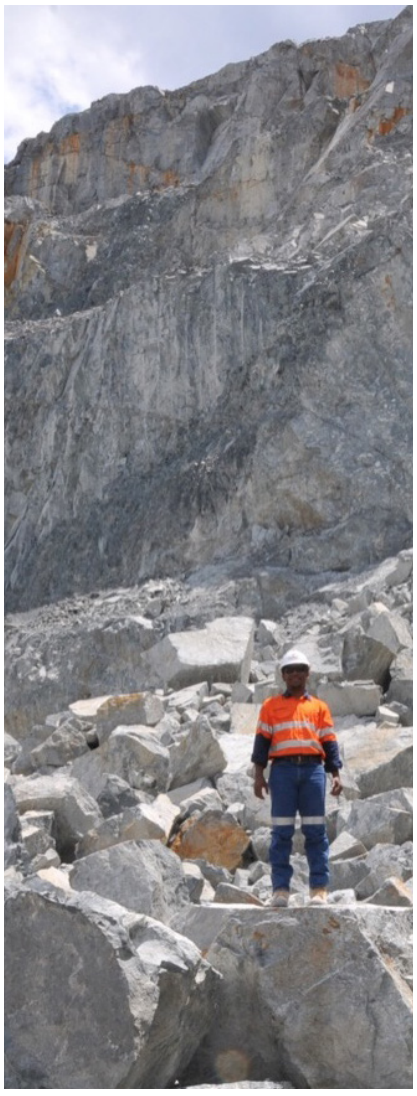
Geotechnical Operational Support and Advisory

MARKETS

Feasibility and Mine Planning I Mine Operations I Mine and Quarry Closure
Rehabilitation, Monitoring and Research

ISO

9001:2015 I 14001:2015 I 45001:2018



Geotechnical Operational Support and Advisory

The effective operation of a mine hinges critically on the expertise and adaptive capabilities of its geotechnical operational support teams.

Diligent and adaptive operations play a pivotal role in maintaining operational continuity and safety within mining environments. Rigorous data analysis, comprehensive risk assessment, and continuous procedural refinement are essential in managing geological complexities and mitigating potential hazards. Advanced modelling techniques and real-time monitoring systems enable timely responses to evolving dynamic geotechnical conditions, ensuring optimal operational performance that minimises operational disruptions.

Geotechnical operational support is vital for enhancing safety, minimising risk, and optimising cost-efficiency throughout the mining lifecycle. Services encompass on-site deployment and remote advisory, offering flexible solutions tailored to meet unique client needs.

Effective QA/QC procedures for face mapping and core logging are imperative for accurately interpreting structural data for operational planning. Integrating and analysing geological, geotechnical, structural, and hydrogeological data are instrumental in meeting rigorous design standards and supporting informed decision-making.

A solid foundation of structural and geotechnical scoping, modelling, and procedural design enables the development of robust frameworks critical for mining operations. This knowledge provides valuable insights into mining-induced stresses and deformations, guiding precise operational planning and comprehensive stability analysis.

To optimise ground and slope stability, a thorough analysis of mine development plans, slope designs, and drilling configurations is essential for modelling observed and monitored conditions to meet the design intent. Modelling is undertaken through advanced 2D- and 3D-numerical modelling techniques to comprehensively assess ground stability for open pit slopes and underground excavations.

Key considerations

1. **Operational Continuity:** Ensuring operational continuity and safety within complex geological environments through data-supported and risk-informed decision-making for risk management.
2. **Inspections and Monitoring:** Employing monitoring strategies and inspection routines that support decision-making on managing evolving risk conditions. These tools are vital for maintaining optimal operational performance and minimising disruptions.
3. **Modelling:** Application of relevant software to model site-specific conditions for predictive and forensic analysis to deduce stability and deformation responses to loading or excavations
4. **Optimising Cost-Efficiency:** Providing tailored support solutions ensures cost-efficiency optimisation throughout the mining project lifecycle. By analysing site-specific needs and streamlining operations, we provide cost-effective solutions that enhance the overall financial performance of mining projects.

5. **Risk Management:** Undertaking comprehensive risk analysis and modelling techniques allows for effective risk mitigation through risk-informed decision-making. Effective and timely implementation of risk management strategies ensures operational safety and efficiency, contributing to the long-term success of mining projects
6. **Site-specific Support Solutions:** Providing flexible, tailored solutions to meet unique client needs through site secondments or remote advisory services. This promotes an integrated approach that fosters relations with all stakeholders.

Approach

A blend of expertise, innovation, and proactive engagement characterises SGME's approach to geotechnical operational support. We prioritise understanding of geological and structural complexities, leveraging advanced technologies and rigorous data analysis to inform our strategies. Our team collaborates closely with clients to tailor solutions that enhance safety, minimise risk, and optimise operational efficiency throughout all phases of mining projects. We specialise in designing and implementing robust procedures, conducting thorough geological and geotechnical assessments, and employing best-practice modelling techniques that support projects to meet their safety and production mandates. By integrating these capabilities with ongoing monitoring and adaptive management practices, SGME provides our clients with resilient and sustainable mining solutions. Our commitment to excellence and continuous improvement underscores our role as a trusted partner in delivering geotechnical support that drives long-term value and success for our clients.

Outcomes

When you engage SGME for geotechnical operational support, you can expect comprehensive services and expertise to develop tailored strategies and plans to tackle unique operational challenges. Our approach ensures efficient and sustainable operations, focusing on safety, risk management, and environmental stewardship. We integrate strategic planning and proactive stakeholder engagement through collaboration to achieve positive project outcomes. SGME is committed to implementing best practices that meet regulatory standards.

Working with SGME

Engaging SGME as a collaborative partner delivers numerous benefits:

- **Improved return on investment (ROI):** Our expertise maximises ROI to satisfy investor expectations.
- **Reduced mine closure risks and disruptions:** Our strategies minimise complex closure risks to ensure a smooth future land use transition.
- **Addressing environmental, social, and governance (ESG) risks:** We focus on ESG criteria to mitigate environmental impacts and meet regulatory standards.
- **Enhanced strategic insight:** Collaboration boosts your performance through strategic planning.
- **Industry collaboration:** We foster partnerships with mining experts, staying abreast of technology and regulatory advancements.
- **Future risk vigilance:** Our proactive approach anticipates future risks to aid informed decision-making.
- **Innovative solutions for safe execution:** Our expertise delivers innovative solutions to ensure safe execution.

Our proactive approach ensures adaptability, sustainability and responsible development to safeguard the mining industry creating enduring value.

CONTACT

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