



CAPABILITY STATEMENT



GEOLOGY SERVICES

We are a team of geologists and geostatisticians who provide practical advice and first-rate consulting services using a collaborative approach.

Cube Consulting geologists all have backgrounds in operational mining, where they each gathered valuable real-world experience allowing them to provide practical, high-quality advice and consulting services. When you engage with the Cube team, the person you meet with is most likely the one who will work on your project, collaborating with specialists as required.

We are happy to tackle the difficult problems – with experienced geologists and geostatisticians on the team, we firstly want to solve the problem and secondly, we work hard to add value to our client's mining company by transferring technical knowledge back to the business.

Cube geologists provide the following services:



Resource Estimation

Geostatistics - Linear & Non-linear, Multivariate, Simulation

Project Evaluation & Independant Review

Geological Interpretation & Modelling

Resource Audit

Statutory Reporting -JORC, NI 43-101, SAMREC Due Diligence

Geological Data Management

Operational Support Mine Reconciliation Review

Geological Training & Mentoring Mine Grade Control Systems

RESOURCE ESTIMATION

We leverage our depth of resource modelling experience to deliver highquality outcomes for our clients, whilst considering and managing geological uncertainty. Resource estimation is the core strength of the Cube Consulting geology team. From undertaking first-principles geological interpretation, through to application of advanced geostatistical modelling techniques, Cube's geologists will deliver what you need to move a resource through to the next project milestone.

We undertake independent mineral resource estimations suitable for public reporting based on JORC 2012, SAMREC and NI 43-101.

We work closely with your team during the resource estimation process to ensure a collaborative result and a positive legacy.

Whether we are providing a geological interpretation, resource estimation or undertaking a statistical analysis, we leverage our depth of resource modelling experience to deliver a quality outcome, whilst dealing with geological uncertainty.





GEOSTATISTICS

We have the expertise in-house to solve the most challenging mineral resource problems, backed by sound scientific principles.

We combine our experience with high quality of work to deliver world-class solutions for our clients

We are specialists in single and multielement analysis, able to offer advice in all aspects, from confirming domains and boundary conditions, comparing drill data types, characterising spatial continuity and nugget effect through to estimation methodology including linear and non-linear techniques.

We will undertake a thorough review and offer informed advice to ensure you have confidence in understanding the risks and uncertainty associated with your project mineral resource.

MINE ENGINEERING

Experienced mining professionals work with our clients in collaboration to mitigate risks, enhance project value and provide data to enable sound commercial decisions.

Cube Consulting's mining engineering team's extensive experience allows us to offer practical solutions for a variety of mining activities spanning a wide range of commodities, mineralisation styles and geological environments. We combine our years of experience with the latest technologies to deliver innovative practical solutions that add value to our clients' businesses.

The mining engineering team works closely and collaboratively with our clients, who range from some of the world's largest mining companies through to smaller operations in need of expert technical advice. Our experienced mining engineers work on projects alongside their clients with a view to mitigating risk, enhancing project value and enabling sound commercial decisions. We offer independent mine engineering and project management services.

Cube mining engineers provide the following services:

Evaluation Studies – Conceptual to definitive feasibility studies	Mine optimisation studies and sensitivity analyses
Ore reserve reporting	Open pit & Underground Mine Design



Cut-off grade studies and strategies

Due diligence evaluations LOM and Strategic scheduling

Project and study management



MINE STUDIES

We are transparent, open and easy to work with. Our team of realworld experienced engineers delivers positive results for our clients.

Whether you are conducting a preliminary assessment or have moved through to feasibility, Cube Consulting mining engineers possess the key experience and skills to deliver a quality mining study. With efficient and effective study management skills garnered through many feasibility studies, a depth of knowledge of constructing and operating mining operations and many years operational experience, we will see that we take a strategic yet practical approach to your project.

Conducting any mining study is an iterative process with dynamic input parameters – we advise you when we think it necessary to revisit parameters which may have a significant impact on the study outcome. Our mining engineers manage parameters in a formalised manner so there is absolute clarity around the investigation and prevailing conditions.

We work closely and cooperatively with other mining professionals, both from within Cube Consulting and externally as required, to ensure the study team achieves a professional result.

LIFE OF MINE AND STRATEGIC SCHEDULING



We always consider practical constraints and work closely with your team to ensure quality decision making.

A critical part of any mining study is the strategic schedule - how many decisions have already been made or are "hard-coded", how large is the impact of various constraints in the system and what targets do we need to achieve to ensure the success of the project. This is not an academic exercise - at Cube Consulting we always consider the practical constraints and work closely with your team to ensure quality decision making.

Cube Mining Engineers have in depth knowledge and experience in the use of leading edge strategic mine scheduling software. This, together with their practical knowledge of mining operations, gives them the ability to generate the optimal strategic schedule for a mining operation. It also gives them the ability to rapidly generate multiple "what-if" scenarios, giving decision makers the best information possible in order to make decisions.

Automated schedule optimisation enables concurrent consideration of a number of variables, allowing the influence of these variables on the strategic schedule to be accurately represented. Incorrect decisions can have a substantial impact on the overall financial performance of a project.

Our mining engineers use Minemax Scheduler, MineSight MSSO, and Deswik suite software to perform cut-off grade optimisation, investigate stockpiling strategies, evaluate timing of capital expenditure and consider practical development schedules when looking at a life of mine schedule. The ultimate goal is that the schedule will be able to provide evaluation of financial impacts of selected key constraints and targets to enable informed decision to be made relating to the development of the mine.



TECHNOLOGY SOLUTIONS



Practical and professional systems for operating mines, developed by grade control specialists.



Cube Consulting produces the popular and widespread Surpac-based GCX grade control system.

GCX provides a logical sequence of commonly performed grade control tasks, integrated into an easy-to-use and intuitive set of menus and forms. Whether you are using a simple estimation technique or more advanced techniques, once we have a full understanding of your requirements, GCX implementation is rapid. Parameters such as material classification and presentation settings are stored externally, meaning you have full control over your system. Reporting and maps are produced with ease.

GCX is available for both open pit and underground environments.

Included with GCX, but available separately for resource modellers, is our Estimation Control System (ECX) which provides the flexibility needed to manage estimations in multi-element and multidomain environments in a repeatable and auditable fashion. The ECX system allows dynamic estimation into folded domains, providing significant time savings and added functionality to Surpac.

We provide full training and documentation to ensure the system is implemented successfully and geologists are productive. GCX and ECX are the most comprehensive and modern grade control and estimation systems available, developed by grade control specialists.





Australia Level 4, 1111 Hay St, West Perth WA 6005 +61 8 9442 2111

For more information +61 8 9442 2111 enquiries@cubeconsulting.com www.cubeconsulting.com

