

## ABOUT US

Mining One is an exciting team of highly experienced and professional mining, geotechnical geological and hydrogeological consultants offering excellence in service and commitment to their clients with high level strategic, hands on practical design and implementation.

Our well respected team has extensive industry knowledge and experience in a diverse range of disciplines.

With our engineering knowledge and skills using a variety of software packages we are able to provide safe, cost-effective and problem solving solutions which reduce mine operating costs, increase productivity and maximise economic extraction.

For more information on any of our services please visit at:  
[www.miningone.com.au](http://www.miningone.com.au)

# Open Pit Capability

Mining One have one of the largest open pit engineering teams in Australia. Their experience ranges from concept through to project implementation, including JORC 2012 and NI 43-101 Reserve Estimation. The open pit team have worked on projects covering a range of commodities such as gold, copper, iron ore, coal, lead, zinc, rare earths, tin, phosphate and various poly metallic deposits. We supply our clients with the reliable, robust tried and true mine planning and operational solutions in the areas of;

## Pit Optimisation

- **Precisely modelling:**
- Complex geotechnical and geological domains;
- Cost drivers, fixed and variable;
- Complex, sometimes multiple, processing and product streams and modelling their costs and recoveries;
- Multiple pits;
- Various open pit mining methods, such as strip mining (directional mining), conventional truck and shovel, tabular deposit mining, etc.;

## Pit Selection

- **Meeting business objectives through:**
- Understanding the business model to align the project strategy with the desired project cash flow profile;
- Strategic scheduling ensuring the practical development of the mine serves to meet the business model;
- Cut-off optimisation; Developing projects with business risk controls while ensuring the Reserve is fully exploited;
- Product specification controls;
- Practically maximising project returns (IRR, NPV, PAYBACK, ROI, etc.,

## Mine Design

- **Practical optimal designs (Pits, Cutbacks, Waste Dumps, etc.) through:**
- Understanding the direction of the strategic schedule;
- Understanding equipment performance and physical safe working characteristics;
- Understanding fleet selection and mine working practices (e.g. drill & blast, presplit, excavator vs face shovel, dragline, bucket wheel excavator, hard rock mining, coal mining, selective vs bulk mining, bench height analysis, mechanical drive truck vs electric drive truck, hydraulic shovel vs electric shovel, bench advance rates, etc.)
- Designs follow geotechnical recommendations; geotechnical recommendations are mine design specific (e.g. orientation, mine life, etc.)

## Mine Scheduling

- **Practical, achievable, risk based:**
- Consider equipment interaction;
- Mining methodology;
- Fleet combination;
- Blasting techniques;
- Dewatering methodologies, slope stability, slope support (timing);
- Bench turnover;
- Acid Mine Drainage controls, waste dump development;
- Mill production, Sales, Product Specification, Blending Requirements, Practical Cut-Off Optimisation

## Leading Edge

- **Dilution Modelling Routine:**
- Simulates an ore mining block;
- Applies specified hangingwall and footwall dilution skins;
- Bench height analysis modelling;
- Reproducible;
- Transparent;
- Flexible;
- Defendable
- **Open Pit/Underground Interface Optimisation**
- Optimises the open pit / underground interface;
- Compares open pit mining with a minable underground mine;
- Practical solutions.