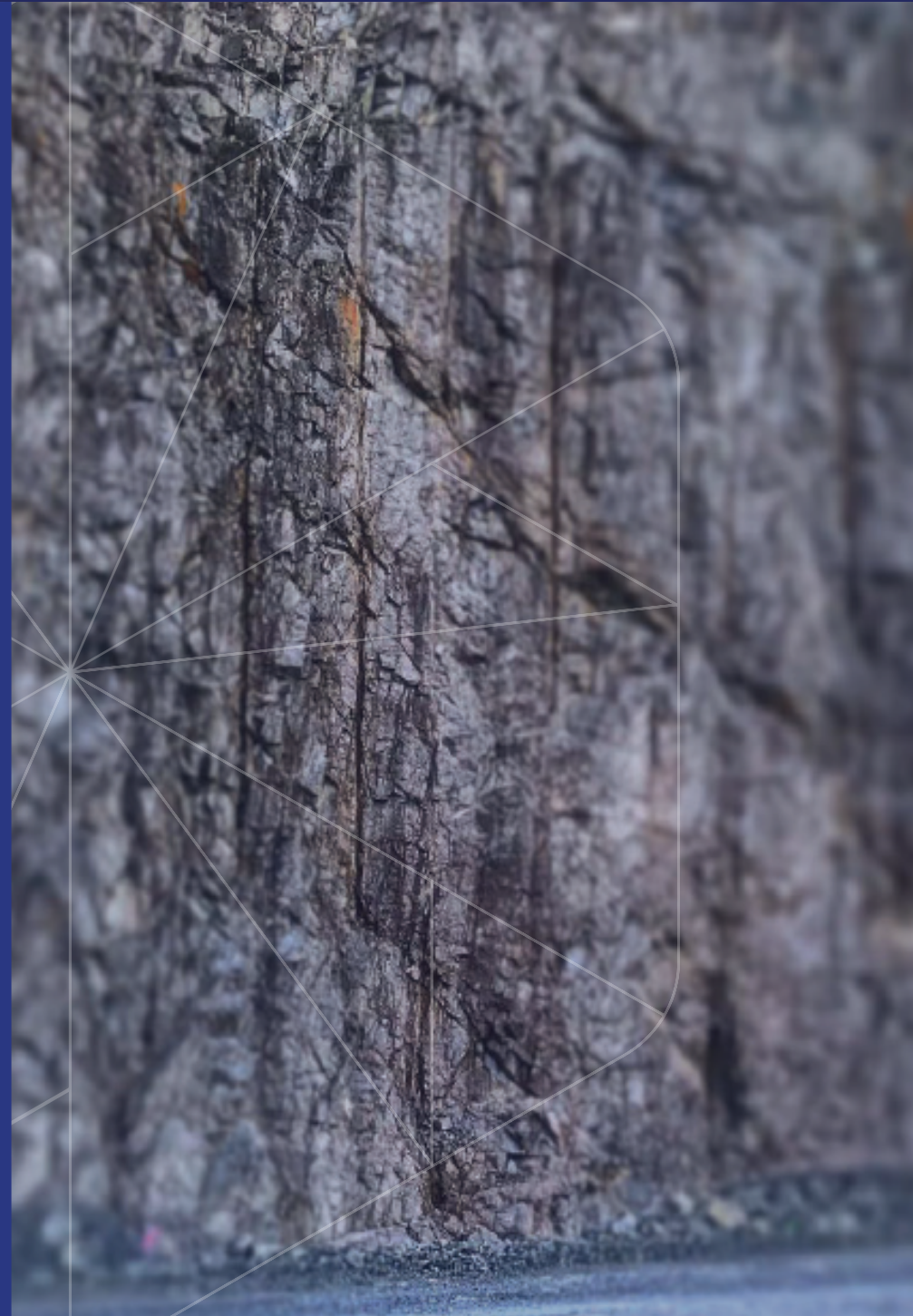




## CAPABILITIES STATEMENT

**DISCOVER  
DELIVER  
RELY**





## ABOUT

Resolve Mining Solutions have been the consultant and embedded team specialists for national and global mining organisations, helping them identify, explore and deliver sustainable project outcomes through innovative yet pragmatic solutions.

**As a company, Resolve's mission is To Do Better.**

This means building agile teams of subject matter experts who can adapt to the changing needs of our clients. We align ourselves with companies who are looking to inspire, develop and support positive change within the industry.

As Director and Principal, Marcus Doyle uses his international mining experience to recruit qualified professionals with esteemed reputations. Team members have high work standards with exceptional technical and communication skills. They understand the importance of fostering long-term relationships and provide their services across most core disciplines.





# ABOUT

## RESOLVE CONSULTING ▼

Our highly qualified personnel meet the stringent requirements of Competent Person (CP) or Qualified Person (QP), reporting and work closely with clients to fully understand the scope of work before providing tailored solutions in the following:

- Mineral resource and ore reserve estimation
- Mine planning, scheduling and optimisation
- Environmental, processing and geotechnical studies and services
- Scoping, pre-feasibility and definitive
- Independent technical expert reporting
- Strategic business, project and operational planning and optimisation
- Project and operational risk assessment and advice

## RESOLVE EMBEDDED ▼

Our team integrate with your team as they work to accurately assess the situation, identify any issues, suggest innovative solutions for implementation, or provide an ongoing source of top talent to execute the project with you. Embedded personnel include:

- Project and operational management
- Contract management
- Engineering services
- Mine production and survey specialists
- Geotechnical experts

## WHY RESOLVE MINING? ▼

By combining specialist advice with technical know-how and demonstrated project management skills, the Resolve team provide practical solutions that meet the business needs, provide theoretical best practice and operational excellence. Resolve base their decisions on established facts, not industry assumptions. Their honest opinions will be what you need to hear, not just what you want to hear, so you can achieve project best practice.

- ◆ *Trusted Experience*
- ◆ *Innovative Solutions*
- ◆ *Consistent Quality*
- ◆ *Seamless Delivery*
- ◆ *Unmatched Value*
- ◆ *Sustainable Outcomes*

“

**Marcus and the Resolve team have been very responsive, flexible and committed to meeting our business needs. Each of the team is first class and can be trusted to deliver.”**

”

**STUART REID  
HEAD OF OPERATIONAL EXCELLENCE,  
GLENCORE MINING**





# SERVICES

Resolve Mining Solutions provide experienced mining consultants and professional, flexible staffing for greenfield and brownfield mining operations. Teams and personnel can be deployed onsite or remotely, to best meet your project needs. Whether it's for the duration of the project or to meet key milestones, Resolve delivers:

- *Consulting Services*
- *Engineering Services*
- *Caving Services*
- *Metallurgy Services*
- *Embedded Team Services*

Our clients benefit from Resolve's ability to source and deploy the following skillsets:

## **MINE MANAGEMENT ▼**

- Mine management (open pit/underground /contract/engineering)
- General management
- Engineering (design, planning, scheduling, drill & blast, ventilation)
- Surveying
- Geology

## **BUSINESS DEVELOPMENT ▼**

- Due diligence
- Peer reviews
- Resource/reserve estimation
- Full mine reviews
- Operational readiness and optimisation
- Capability and performance assessment
- Strategy review
- Expansion optionality
- Contract/tender assistance and reviews
- Business turnarounds and improvements
- Change management
- Automation implementation

## **OPERATIONAL MANAGEMENT ▼**

- General mine management
- Mine restart and closures
- Operational support
- Mining and infrastructure projects

“

**Resolve Mining Solutions provided us with a Senior Mining Engineer for 4 months while we were recruiting to fill the role. The consultant took on the role as if it were his own and made a significant contribution to the operation during his contract. Resolve was fantastic to deal with throughout the contract and have provided some exceptional potential candidates for various other positions we have recruited for.**

”

**SAM NETHERBY  
MINING MANAGER  
KIRKLAND LAKE GOLD NT MINING OPERATIONS**



# SERVICES

## WHAT WE OFFER

### EXPERTISE

When recruiting new team members, we cast the net wide. We look for professionals with national and global experience, who have real expertise overcoming the technical and operational issues facing mining operations.

### QUALITY

When we say our team, that's exactly what we mean. We engage our talent permanently, so they focus on delivering A-grade work that meets our standards and your requirements. Their heads are in delivering today's project, not sourcing their next contract, so you get the best they have to offer, consistently.

### VALUE

It's the little things that matter, like our team's experience with the most common mining programmes - Surpac, Whittle, Deswik etc. Less time training and inducting means more time tackling the big issues, faster.







# CONSULTING SERVICES

The consulting team at Resolve Mining Solutions has built a reputation for practical, innovative, and professional delivery of tailored solutions for brownfield, greenfield and producing mining operations. The team cover the core disciplines for almost all project needs, including geotechnical engineers, mining engineers and metallurgists.

Working alongside our clients, we meet or exceed expectations in producing outcomes with the best available technical, management and operational solutions. We're not afraid to tackle complex problems, understanding that every minute counts. Our study work delivers practical and achievable outcomes, especially when we're engaged in early-stage studies.

## SERVICES INCLUDE

### BUSINESS DEVELOPMENT ▼

Utilise the expertise of the Resolve team to increase the long-term value of the mining operation. By understanding the overall objectives, strategic plans can be developed that result in the alignment and engagement of all involved. Areas of expertise include planning and project management, stakeholder consultation, and change management.

### FULL MINE REVIEWS ▼

Resolve team members have operational experience and the tools required to review operations and provide constructive feedback.

### DUE DILIGENCE ▼

Resolve consultants don't just tick boxes when they undertake due diligence. Their role is to question assumptions to provide quality recommendations. Their goal is to dig deep to fully understand the critical elements that need addressing, the risks that need mitigating and the opportunities that will add the most value.

### STRATEGY REVIEWS ▼

Commissioning a strategy review can provide astute leaders with untapped potential. As independent, non-biased consultants, our role is to find the hidden gems. Again, through challenging assumptions (often long-held or inherited), the multi-disciplinary, highly qualified personnel at Resolve identify tangible options, pressure test them and then implement the right metrics for comparison to improve productivity and value.

### STUDIES (SCOPING THROUGH TO BFS) ▼

Resolve's robust and comprehensive study management allows you to trust your business-critical decisions. You can be confident your project has undergone rigorous engineering and economic analysis by globally experienced management, technical and operational consultants. Studies also include the assessment of optimum mining methods and suitable trade-offs.





# ENGINEERING SERVICES

Benefit from our globally experienced team as they deliver a refreshing, responsive and customer-focused approach to their work. Engaging with established and developing mining companies, we continue to provide high quality solutions and project advancements that offer value for money.

We're committed to delivering high quality studies and ensuring each phase includes high levels of peer review and client involvement, with clear communication to key decision makers to manage expectations and expectations effectively.

## SERVICES INCLUDE

### STUDY MANAGEMENT ▼

Our experienced study managers bring their knowledge of operations, and technical excellence, to deliver the precise outcome.

### GEOTECHNICAL INVESTIGATIONS ▼

Resolve's geotechnical engineers use their expertise to work effectively with mining engineers and the client team to develop design parameters and provide recommendations to complete project assessments. Their practical on-site experience is combined with their structural interpretation, stability analysis and rock mass characterisation resulting in:

- High quality pit slope design recommendation or underground design
- Ground support criteria for development drives, stopes, shafts and portals

Resolve also provide clients with geotechnical support including:

- Design and review of geotechnical investigations
- Provision of logging and mapping services
- Validation of geotechnical and structural interpretations

### OPEN PIT AND UNDERGROUND OPTIMISATIONS ▼

At Resolve, we recognise the importance of preliminary studies to a project's value. We specialise in both open pit and underground optimisation and work closely with technical and financial stakeholders to find:

- Optimal pit shells
- Optimal stope shapes
- Best method for economical mining depth
- Ideal cross-over between open pit and underground
- Most practical size and scale of the operation

Our consultants can also undertake dilution modelling, phase analysis, minimum mining widths and discounted cash flow analysis.

### MINE DESIGN ▼

Following optimisation, our team will create the optimal mine design and infrastructure layouts.

The mine design includes:

- **Conceptual plans** to determine layouts and sequencing before final designs are developed. This includes practical pit staging; waste dumps; stockpiles; haul road layouts; underground developments; stoping designs; cross-over access needs
- **Parallel investigations** including backfill, ventilation, ground support and drill and blast design (including fragmentation and caving analysis) are undertaken to provide a design that is both practical and achievable

# ENGINEERING SERVICES

## COST MODELLING AND EQUIPMENT SELECTION ▼

Capital and operating cost estimation is required at all stages of a mining study. All key milestones include a net worth assessment to ensure the study retains a focus on project value. The Resolve team have significant experience in calculating operating costs which form the basis of the mine plan. This knowledge allows us to prepare high quality capital and operating cost estimates aligned with the production plan. They include:

- Equipment selection and fleet sizes
- Staffing levels and rosters
- Development and closure costs

In addition, the Resolve team are experienced in the planning and implementation of automation systems across multiple OEM platforms and mining applications. We support our clients during the implementation of tailored automation systems as well as preparing implementation plans ready for execution.

## STRATEGIC AND LIFE OF MINE SCHEDULING ▼

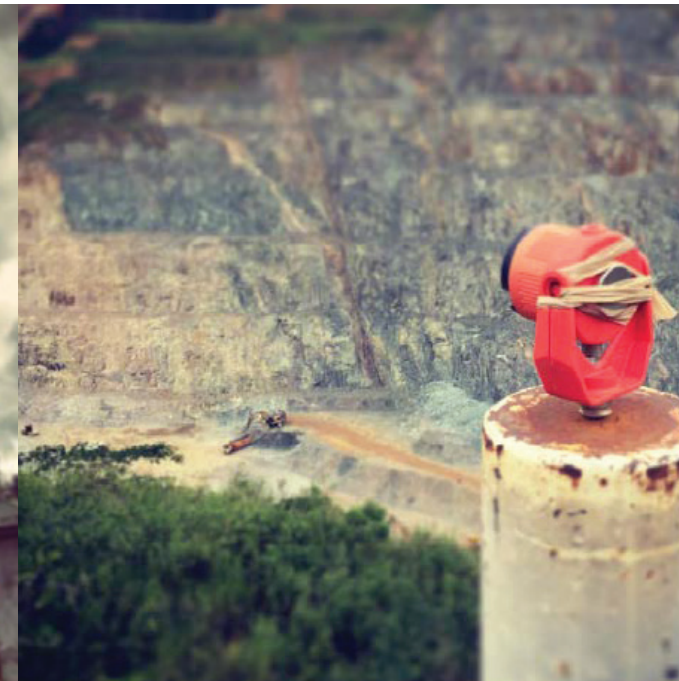
As the production schedule is critical to the value of the project, it needs to be both strategic and practical. It needs to demonstrate the outcomes of constraints such as:

- Processing rates
- Mining advance
- Development rates

The Resolve schedule allows for fast options analysis to select the most practical and valuable scenario. This can then be used as the basis for detailed scheduling in short or long-term mine planning. The detailed plans include an analysis of elevated cut off grades, stockpiling and ore blending. All whilst achieving a practical objective within the processing and mine constraints.

## INDEPENDENT REVIEWS AND DUE DILIGENCE EVALUATIONS ▼

Resolve can provide technical reviews for mining projects from early-stage evaluations to feasibility study reviews and due diligence evaluations for mergers and/or acquisitions. Our talent for providing mining project reviews includes geotechnical engineering, metallurgy and mining engineering experts. Outside of the Resolve team, we have strong relationships with other technical specialists who we can call on depending on the review requirements.







# CAVING SERVICES

Resolve's cave mining team includes top Australian talent in mining and geotechnical engineering. Their qualifications, experience and interpersonal skills mean they are relied upon to deliver a diverse range of projects. Available for consultancy or embedded teams, they're available for projects throughout Australia and the global stage.

Working closely with a diverse range of caving clients to maximise their value, we specialise in identifying and driving value-added improvements and enhancing business strategy. The experienced team at Resolve have the capabilities to offer simple, practical and efficient solutions to all stages of the caving project cycle.

## SPECIALIST SKILLS ▼

Our team has significant experience in:

- Evaluating caving specific risks
- Developing and implementing risk management systems
- Mine technical services including block and sublevel caving experience in
  - Mine design
  - Mine planning and scheduling
  - Drill and blast
  - Ventilation

## SOFTWARE APPLICATIONS ▼

Our team is experienced in the main mining software packages, including experts in the Deswik suite of programmes, PGCA, PCBC and PCSLC. We're also proficient in most of the software solutions currently available.

We further support clients with technical and software training, as well as ongoing operational support and reviews to enhance the professional development of the mine site technical staff.

“

**All of our dealings with Resolve have been first class. Their flexibility in working with us to deliver outcomes, as and when required, has been greatly appreciated. They have always delivered excellent value and have demonstrated their commitment to put the client's needs first. The depth of knowledge in their caving team sets them apart.**

”

**JAMIE WIDAUER  
CMOC NORTHPARKES**

# CAVING SERVICES

## BUSINESS DEVELOPMENT ▼

Productivity and business improvement is critical in the caving industry given the low-grade nature of the deposits being mined. To further enhance our clients' operations, Resolve offers a variety of business development services, including:

- Due diligence and peer reviews
- Reserve estimation compliant with JORC 2012
- Full mine reviews
- Scoping and feasibility studies
- Capability and performance assessment
- Strategy reviews
- Operational readiness and optimisation reports
- Expansion optionality and trade-off studies
- Contract tender assistance and reviews
- Risk management systems
- Automation system design and implementation

## RECENT EXPERIENCE INCLUDES:

- Newcrest Mining, Cadia East
- Oz Minerals, Carrapateena
- CMOC, Northparkes Mines
- BHP, Nickel West, Leinster
- EMR Capital, Capricorn Copper



“

**Marcus and the Resolve team have been a great fit for us with a flexible approach and a quality team. When we went to them, we were looking for specific technical assistance to meet our project goals. The expectations we had were exceeded thanks to the breadth of experience and the quality of the delivery.**

”

**GEOFFREY NEWCOMBE  
MANAGER- MINING STUDIES- NEWCREST**



# METALLURGY SERVICES

Resolve Mining Services has a growing team of skilled metallurgists working with established and developing mining companies to provide high quality solutions and project advancement.

Our team of metallurgists are experienced in technical and management roles across a wide variety of commodities. This ensures the study work undertaken is practical and achievable.

Our practical experience means we are well placed to support teams undertaking scoping, PEA, PFS and DFS studies for processing plant projects across base metals, gold and other industrial minerals including lithium, tungsten and mineral sands.

## SERVICES INCLUDE

### STUDY SUPPORT ▼

Resolve works alongside our clients to support studies of developing and expanding mineral processing facilities. The team can provide:

- Plant equipment selection, sizing & reviews
- Plant layout reviews
- Process flow sheet development & reviews
- Design and management of metallurgical test work programmes
- Due diligence reports & independent technical reviews
- Process modeling and simulations
- Development of mass balances and process design criteria
- High-level CAPEX/OPEX estimation
- Selection of metallurgical test work samples
- Review of metallurgical test work data & reports
- Management of pilot plant programmes

### METALLURGICAL INVESTIGATIONS AND PRODUCTION IMPROVEMENTS ▼

When our practical, on-site experience is combined with metallurgical analysis and testing, we're able to provide high quality metallurgical recommendations. We also provide our clients with the support needed to implement any necessary production improvements.

### PRODUCTION SUPPORT ▼

From commissioning to steady-state operations, plant expansions and ramp downs, Resolve's metallurgy team have run some of the world's largest plants, as well as smaller scale facilities. We are keenly aware that each operation requires a tailored production management strategy, and we provide the right skill set to match the operation. This can be from plant metallurgist through to process manager.

### RECENT EXPERIENCE INCLUDES:

- Commissioning of Molybdenum flotation facility, New South Wales
- Assistance with feasibility study for underground Copper/Gold deposit (metallurgical test work management and review, commutation modeling review)
- Operational readiness of Minerals Sands facility, New South Wales
- Operational support for Rosebery Copper/Lead/Zinc concentrator
- Independent review of pre feasibility studies and feasibility studies for major Copper/Gold miner
- Commissioning/ramp up review of Gold plant





# EMBEDDED TEAM SERVICES

Resolve Mining Solutions are all for disrupting the industry of the supply of mine professionals.

Our approach is to permanently hire our embedded professionals so our team are available to work alongside clients and fill critical roles on-site, with a sense of personal and professional security. By offering this continuous support, our team can be nurtured and developed in line with their career goals, and our clients requirements. Whether the role is a short-term mine production or geotechnical role, or a long-term technical study, they give their A-grade focus from start to finish, knowing their future is secure.

This provides stability, consistency and quality to our clients and their projects.

## WHY RESOLVE EMBEDDED TEAMS?

### TAILORED EXPERTISE ▼

Resolve offers varied and flexible services to accommodate the varying needs of mining companies. We have the capacity to fulfill projects with a comprehensive team, or we can provide specific skill sets from our pool of highly experienced professionals.

### TOP TALENT ▼

Our team includes top Australian and international talent including general managers, mine managers, mining engineers, geologists, surveyors and metallurgists. Each member of the Resolve team has been chosen for their outstanding qualifications, experience and interpersonal skills.

### EFFORTLESS PROCESS ▼

We pride ourselves on managing the hard stuff for you. We'll assess your needs, assign qualified talent, help you on board them and help them to ensure they deliver quality results. At Resolve, we commit to the quality of our delivery; from our first conversation through to the successful placement of our people, while going the extra step to ensure you achieve the required outcome.

### UNBEATABLE RESULTS ▼

Resolve have worked with mining companies large and small. We're able to supply experienced, qualified personnel on short lead times for short projects through to extended placements. Our team consistently deliver results that exceed expectations.

“

**Resolve has consistently provided high calibre mining engineers with exemplary work ethic and an ability to seamlessly integrate into the operation while maintaining a level of flexibility and cost-effectiveness that aligns with the requirements of our business.”**

”

**BEN TAYLOR  
MINING CBH RESOURCES RASP MINE**



# EXPERIENCE

## Name CMOC Northparkes, Goonumbla, NSW

Client	China Molybdenum Co., Ltd (CMOC) & Sumitomo Groups
Deliverable	Undercut design assessment and further design to continue without operational disruption
Scope of Work	Thorough evaluation of the mining areas and a new tailored development and drill and blast design to progress block caving operations
Key outcomes	Resolve completed design and option trade-offs remotely while working closely with the CMOC Northparkes team

## Name Gwalia underground mine, Kalgoorlie, Western Australia

Client	St Barbara
Deliverable	Updated ventilation system
Scope of Work	Supplement the on-site team with management and supervision to progress the upgrade while maintaining operational safety
Key outcomes	Our attention to stakeholder engagement ensured the Resolve team integrated seamlessly with the existing site team, minimising the impact on the overall site operations

## Name RASP Mine, Broken Hill, NSW

Client	CBH Resources
Deliverable	Embedded Mining Engineers
Scope of Work	Interview client to get full understanding of the roles, then recruit and tailor a shortlist of top prospects based on skills, attitude and personality to adapt to the team
Key outcomes	Resolve was able to provide high calibre professionals with a turn around of four weeks. The relationship has continued with long-term staffing engagements site operations

## Name Soto Norte, Colombia, South America

Client	Minesa
Deliverable	Temporary General Manager of Operations
Scope of Work	Role included creating a work plan for operational readiness, technical assessment of feasibility study viability, timely delivery of feasibility study
Key outcomes	Resolve supplied an experienced international mining veteran, able to mobilise quickly and work in an embedded capacity until the permanent GMO was available to take up the role

## Name Cowal Gold Operations, Lake Cowal, NSW

Client	Evolution Mining
Deliverable	Infrastructure review to assess the feasibility of an in-wall ramp
Scope of Work	Visit the site to meet the team and develop a deeper understanding and complexities of the project, before completing review remotely
Key outcomes	Began work within a week of contract commencing and completed the study below budget and ahead of the deadline

“ The Resolve team is a diverse group of engineers with varying levels of experience. They have been a great fit for us when moving into a new team, bringing with them positive attitudes and a great work ethic. ”

**MICHAEL DOMBORSKI**  
TECHNICAL SERVICES MANAGER, GLENCORE MINING

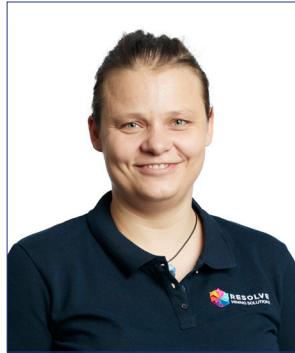


# TEAM



**Marcus Doyle**  
*PRINCIPAL*

- Operational management
- Safety management
- Business turnaround
- Strategic planning and execution
- Productivity improvement
- Team development



**Claudia Vejrazka**  
*PRINCIPAL CAVING SPECIALIST*

- Underground and open cut mine design and planning
- Block caving & sublevel caving operations
- Cave modelling & construction
- Cave operations & rehabilitation
- Air blast risk



**Matthew Stone**  
*EMBEDDED MANAGER*

- 8 years industry experience in UG hardrock operations
- Effective leadership & team development
- LOM, strategic planning & scheduling
- Short term planning & scheduling
- Continuous improvement & cost reduction initiatives



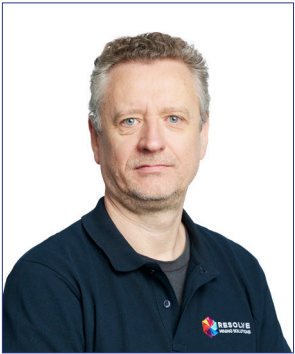
**Luke Stannard**  
*PROCESS MANAGER*

- Australian and International experience
- Operational and safety leadership
- Asset transition & development
- Cross-functional operations support
- Improvement and process optimisation





# TEAM



**Andrew Hutson**  
*SNR PRINCIPAL MINING  
CONSULTANT*

- 30+ years' experience
- Australian and International projects
- Owner- mining and contracting operations



**Madeline Merrett**  
*SENIOR GEOTECHNICAL  
ENGINEER*

- Geotechnical engineering
- Underground mining
- Design optimisation and safety
- Geotechnical risk management
- Numerical modelling and business analytics



**Robyn Teet**  
*SENIOR GEOTECHNICAL  
ENGINEER*

- Geotechnical engineering
- Underground and open-pit mining
- Design optimisation and safety
- Geotechnical risk management
- mXrap development





# METHODOLOGY

Resolve have a 'TEN STEPS' approach to how we work with all clients, whether its consulting, engineering services or embedded staff.

## 1 IDENTIFY A NEED

Clients realise there is a need for Resolve's service to assist with their project.

## 2 INTERVIEW THE CLIENT

Resolve work closely with key client representative (and stakeholders where required) to thoroughly understand the challenges of the project. This may include a series of phone or in person interviews, workshops and/or site visits.

## 3 DETERMINE CONSTRAINTS

During the interview process, the constraints of the project (usually time, resources or budget) become evident and allow both client and Resolve to determine a best course of action.

## 4 DEVELOP THE SCOPE OR PROJECT BRIEF

Resolve develops a comprehensive scope of work for the role or project. The project scope identifies clear skills, experience and expectations required.

## 5 TALENT MATCH

Resolve carefully tailor a list of top prospects suitable in experience and skills to fill the role or complete the project.

## 6 SMOOTH TRANSITION

Resolve Mining Solutions processes and people ensure there is a smooth handover into the team or project, working closely with the client and, if required, key stakeholders.

## 7 REALISE VALUE

As an independent third party, Resolve comes into projects and roles with fresh eyes and ideas. We challenge assumptions and ask the tough questions to find the best outcomes for the project.

## 8 DELIVER RESULTS

We're not happy at Resolve unless we provide your deliverables on time and on budget.

## 9 SUCCESSFUL OUTCOME

We measure success by our ability to align the team to support a project's needs without compromising the essentials: safety, environment and the community.

## 10 RELIABLE RELATIONSHIPS

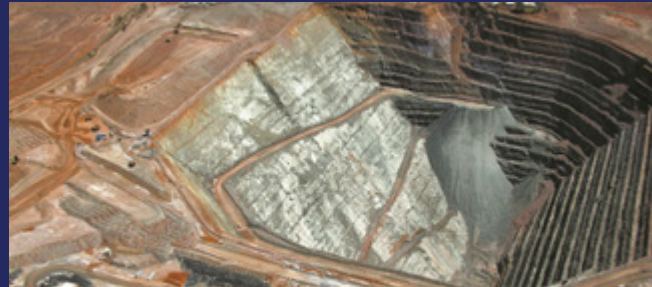
Resolve establishes long-term working relationships with their clients, based on mutual respect, honesty and transparency.



# PROJECTS AND PLACEMENTS



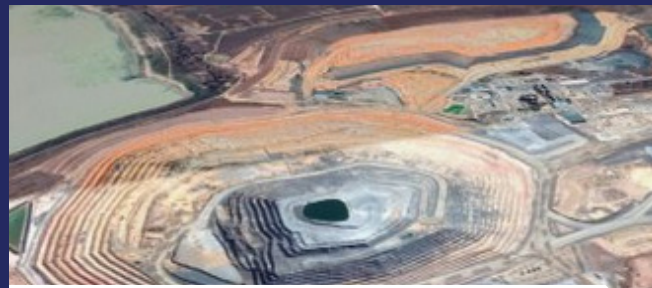
**CMOC Northparkes**



**St Barbara, Gwalia Operations**



**RASP Mine**



**Cowal Gold Mine**

## CLIENTS INCLUDE:

- ▶ BHP Olympic Dam
- ▶ Glencore George Fisher, MICO and Lady Loretta
- ▶ Red5 Ltd King of the Hills Mine
- ▶ Regis Resources Rosemount Operations
- ▶ Minesa Sociedad Minera de Santander Columbia
- ▶ Kirkland Lake Cosmo and Fosterville
- ▶ CBH Resources Rasp
- ▶ Oz Minerals Carrapateena
- ▶ Somisy
- ▶ Evolution Energy
- ▶ Allied Gold
- ▶ 29 Metals – Golden Grove
- ▶ Bellevue Gold
- ▶ Blackstone Minerals
- ▶ Ernest Henry
- ▶ Evolution Mining – Lake Cowal
- ▶ Bluestone Metals - Renison
- ▶ MMG - Dugald River
- ▶ Tronox
- ▶ Sandfire Resources – Degrusa
- ▶ Vimy Resources
- ▶ Ausgold Limited
- ▶ Iluka Resources
- ▶ Leo Lithium
- ▶ Lontown
- ▶ Global Lithium



## CONTACT DETAILS

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