

# RUC



## CAPABILITY STATEMENT





## WELCOME



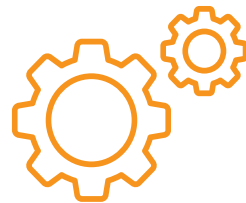
Greg Miller  
RUC Mining  
Managing Director

**RUC Cementation Mining is a diversified underground mining contractor with an extensive portfolio of completed and current projects throughout Australia and the Asia-Pacific.**

**From its beginnings as a raise drilling specialist, the company has gone on to partner with some of the biggest names in the mining industry across the full range of their underground development and production requirements.**

**With its extensive fleet of modern equipment and a highly experienced and qualified team of mining professionals, the company has gained a reputation for successfully tackling the most complex and challenging works.**

**As part of the global Murray & Roberts group, RUC Mining is a confident and steadfast partner committed to innovation in designing ever safer working practices and more efficient development and production techniques. Operating in locations from the remote to the highly urbanised, the company seeks to maximise the engagement of local workers, whilst maintaining quality and world's best practices.**



**MECHANISED  
MINING**



**SHAFT  
SINKING**



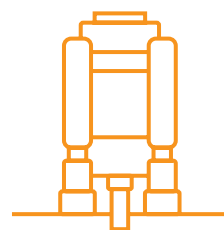
**RAISE  
DRILLING**



**SPECIALISED GROUND  
SUPPORT GROUTING  
AND CONSTRUCTION**



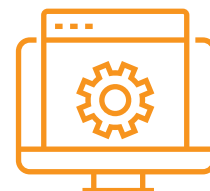
**UNDERGROUND  
CONSTRUCTION**



**BOXHOLE  
BORING**



**MASS  
EXCAVATIONS**



**AUTOMATION AND  
MINING TECHNOLOGY**





## ABOUT MURRAY & ROBERTS

(PARENT COMPANY OF RUC CEMENTATION MINING)

**RUC is 100% owned subsidiary of Murray & Roberts group of companies. It is part of the Underground Mining platform of Murray and Roberts.**

The Underground Mining platform operates globally, and its service offering spans the project life cycle, including feasibility studies, specialist engineering, vertical and decline shaft construction, mine development, specialist mining services such as raise boring and grouting, and contract mining.

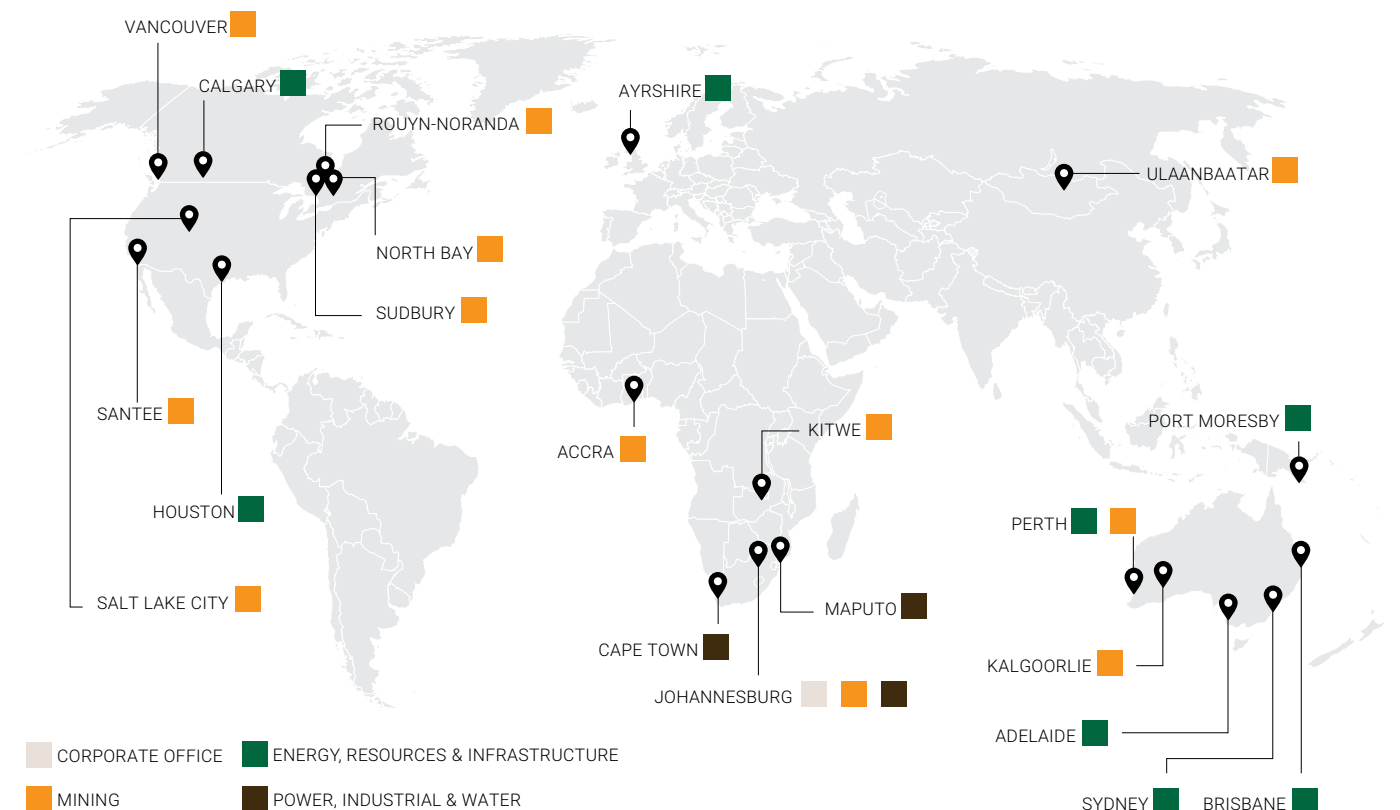
As one of the largest underground mining contractors in the world, the platform has significant market share in the jurisdictions in which it operates. It is currently engaged on projects in Australia, Canada, Indonesia, Mongolia, South Africa, USA, Mexico, Chile, Kazakhstan and Zambia. These include 18 shaft sinking and equipping projects, 21 decline and mine development projects, eight production mining projects, 13 support and construction projects, and two major ore handling infrastructure construction projects.



During the last financial year Murray & Roberts generated A\$2.0 billion in revenue with \$126m in profit before interest, depreciation and amortisation. The underground mining platform was the most dominant earner contributing A\$1.0 billion to the revenue and \$79m to profit before interest, depreciation and amortisation.



**“The Underground Mining platform operates globally, and its service offering spans the project life cycle, including feasibility studies, specialist engineering, vertical and decline shaft construction, mine development, specialist mining services such as raise boring and grouting, and contract mining.”**

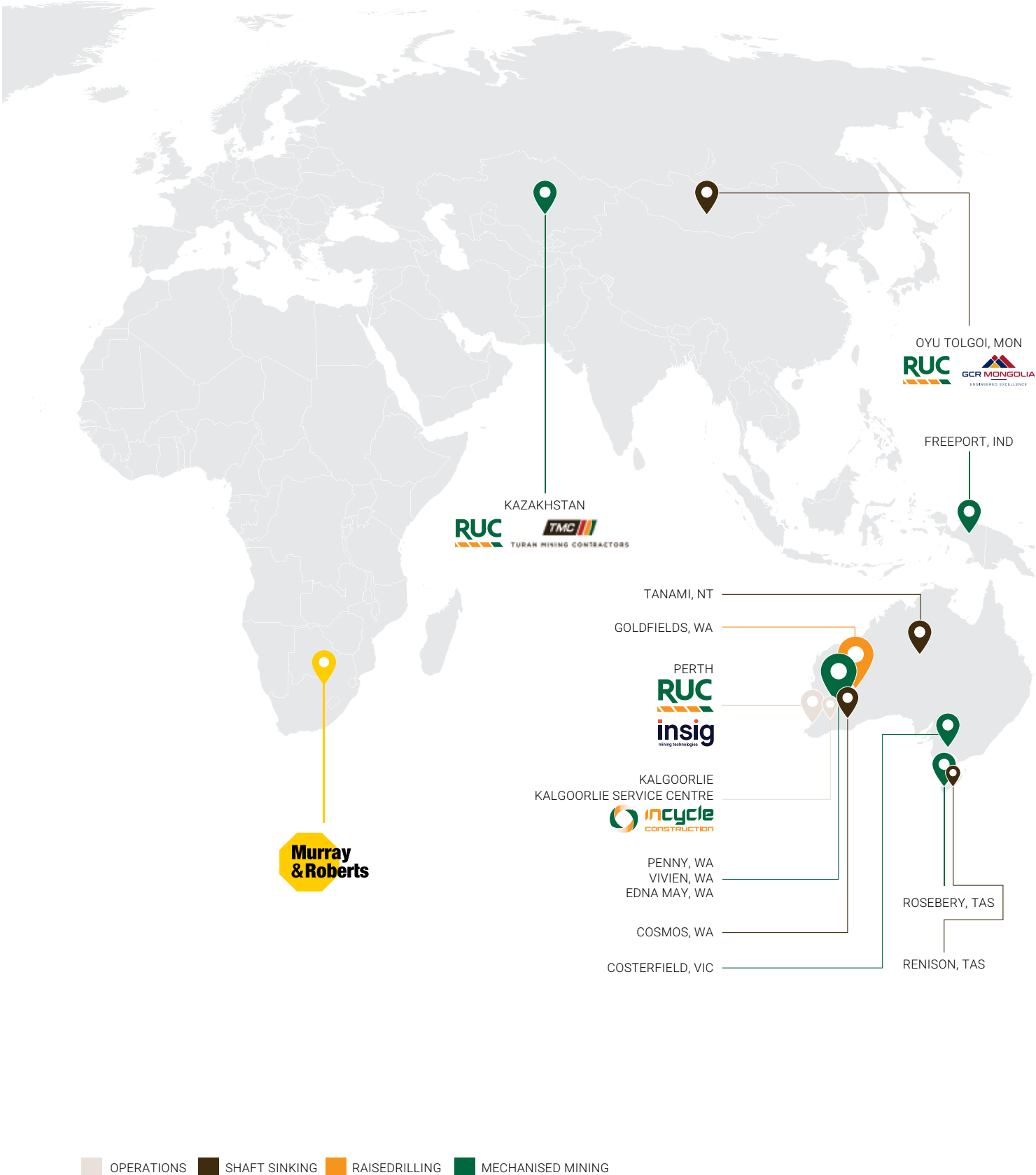
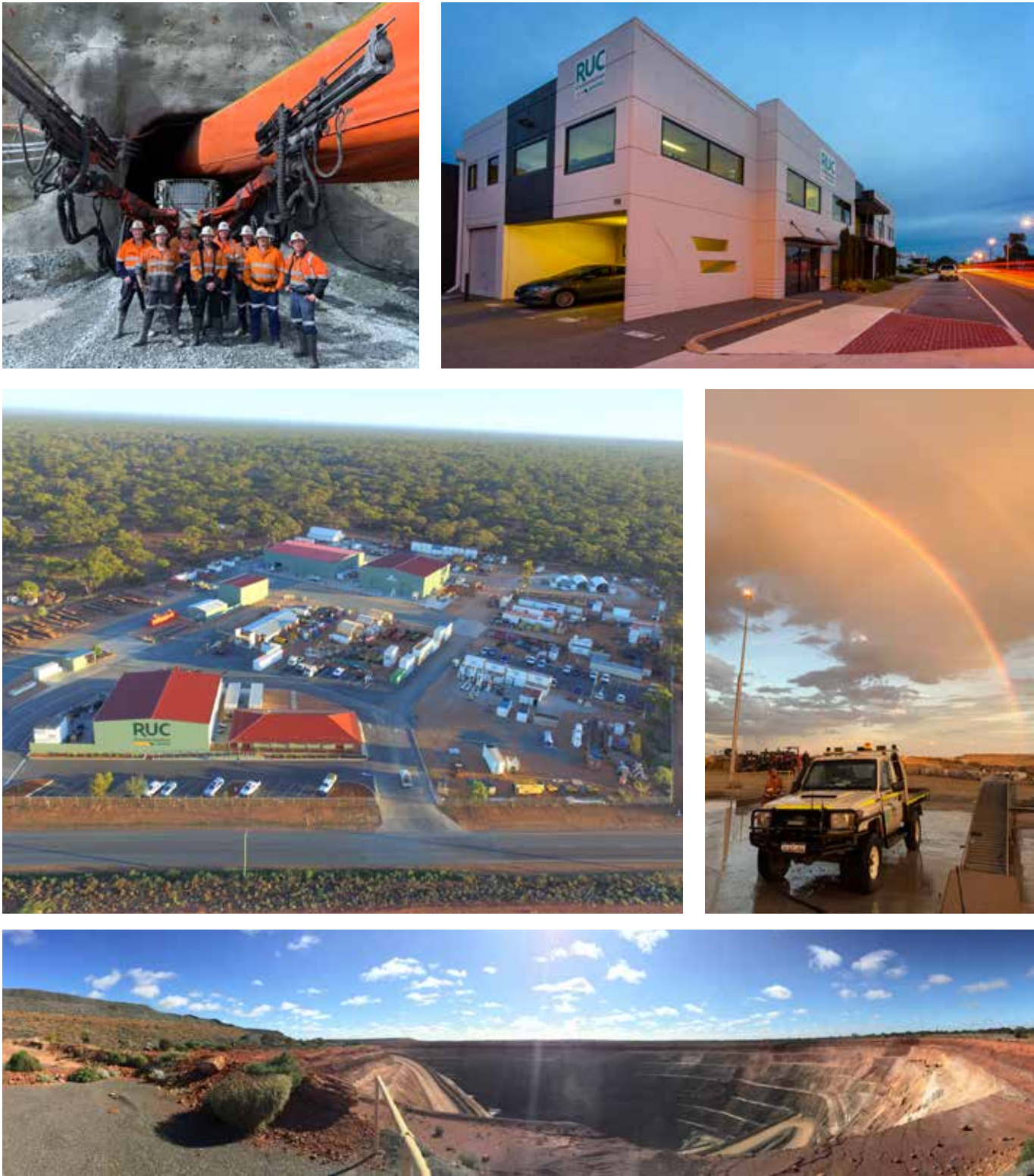


**REVENUE**  
**A\$2.0 BILLION**  
(FY2020)

**EBITDA**  
**\$126 MILLION**  
(FY2020)



# RUC MINING'S MAJOR LOCATIONS AND UNDERGROUND MINING PROJECTS



# MURRAY & ROBERTS GROUP STRUCTURE

Murray & Roberts Group divides its capabilities into three global primary market sectors: oil & gas; metals & minerals and power & water. Murray & Roberts is headquartered in Johannesburg, South Africa, and is listed on the JSE Limited. It also has offices in Mozambique, Zambia and Ghana. Australia, South Korea, Scotland, USA and Canada.

Murray & Roberts is a group of world-class companies and brands aligned to the same purpose and vision, and guided by the same set of values.

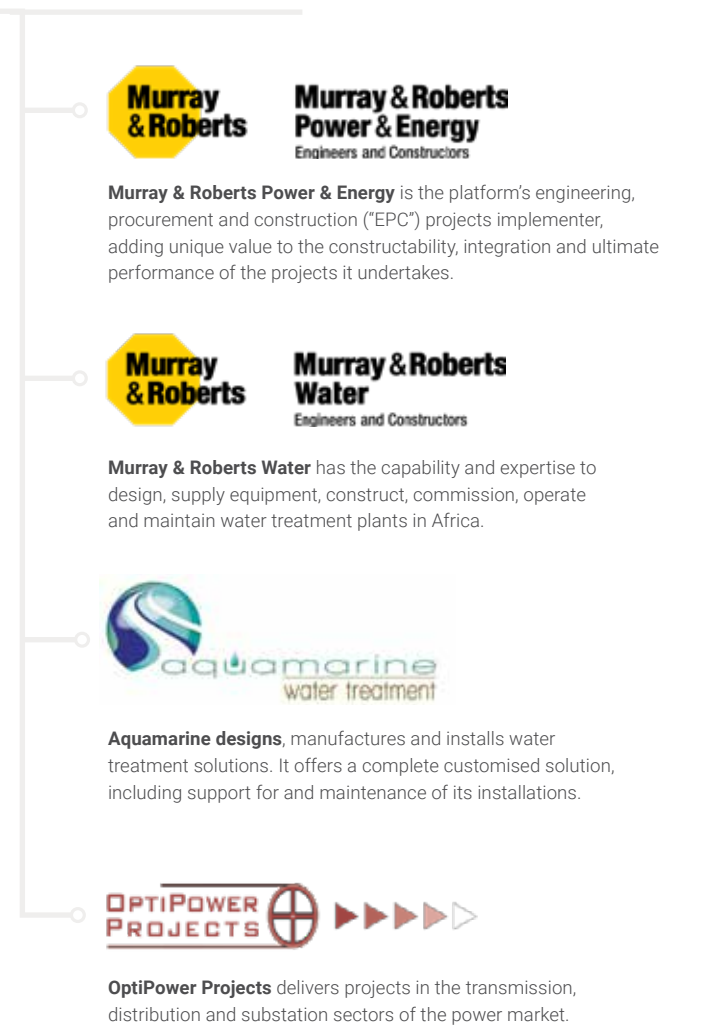
## UNDERGROUND MINING



## OIL & GAS



## POWER & WATER





## ABOUT RUC MINING AUSTRALIA

RUC's domestic operations are managed from offices in Perth and a regional operations center in Kalgoorlie. Internationally, RUC has offices and branches/subsidiaries in Indonesia, Mongolia, Kazakhstan, Hong Kong, New Zealand, and the Philippines. We're well experienced and highly respected in Australia. We have earned trust marks across the globe for our work in managing major projects.

Mining is inherently uncertain, and while there may be no such thing as certainty, we believe it's worth striving for. Certainty of quality, performance, delivery and industry– leading safety. It's the driving factor of our purpose – to bring certainty underground.

InCycle Shotcrete was formed in 2004, to bring a new level of professionalism and capability to the supply and application of ground support materials for the mining and civil construction sectors. After a successful period of organic growth and diversification, in 2011, the company became part of the international RUC Cementation Mining Contractors.

RUC Cementation Mining delivered a remarkable result in FY 2019. The securing of a significant shaft sinking contract for two large diameter vertical shafts for Rio Tinto at its Oyu Tolgoi mine in Mongolia supported this performance.

Further scope growth in the contract with Freeport in Indonesia, and the exceptional efficiencies achieved by this project team contributed significantly to earnings. RUC Mining Australia secured several other contracts e.g. Ramelius Resources, Edna May, Vivien and Grange Resources at Savage River.



### **GREG MILLER** **MANAGING DIRECTOR**

Greg is a senior mining professional with 20+ years of industry experience. Responsible for the leadership of the Underground Division of a major Australian contractor, his expertise encompasses safety, leadership, business development, operations management, and general business management activities.



### **GERRIE PIETERS** **FINANCE DIRECTOR**

Gerrie started his career in South Africa with the Murray & Roberts group in 1990, his career of over 30 years was in the Underground Mining contracting field. He obtained his BCompt degree in 2003 and fulfilled various administrative and commercial roles throughout his career in all aspects of the Mining field which include Cementation, Raise boring, Surface drilling, Drop raising, Shaft sinking, Decline sinking, Development, Contract mining and mining construction.



### **SEAN HENLEY** **ASSOCIATE DIRECTOR SHAFTS & UNDERGROUND CONSTRUCTION**

Sean Henley is a qualified mining engineer holding a First Class Mine Managers Certificate with extensive experience in Contracting, Project Management, Business Development, and Estimating on both International and Domestic Projects. With over 20 years' mining experience and using practical problem solving approach, energetic leadership and excellent negotiation skills to deliver results on a number of complex projects.



### **DAVID SMITH** **DIRECTOR, PEOPLE, RISK AND THE ENVIRONMENT**

Executive Leader with a zero harm value set and proven ability to strategically vision and plan SHEQ&T, engage and coach, execute and monitor, audit and continually improve risk management policies and procedures, and to introduce globally benchmarked initiatives that exceed business performance expectations and goals and also protects people, the environment, company reputation and assets. Led over 20 group entity and worldwide sites to achieve Best Practice SHEQ&T standards as the Group Manager – Safety, Environment, Quality and Training, for RUC Mining.



### **TRACEY CHAN** **FINANCE CONTROLLER AND COMPANY SECRETARY**

Tracey is a CPA qualified Accountant with 16 years' experience working in various industries, including telecommunications, engineering and construction, professional services and the property sector. She started her career in Perth with Gascoine Group and VDM Engineering and Construction, before moving to London to work for City of London Telecom. Tracey joined RUC in 2014 and manages the day-to-day finance function, supporting internal and external business stakeholders, Project Managers and The Board of Directors.



### **NICK MAGUIRE** **MANAGER MECHANISED MINING AND RAISE BORING**

Since 1996, Nick's career to date has predominantly involved underground metalliferous mining. His experience gained during this time has been from the ground up, having spent years working underground at the 'coal face' through to statutory and senior management positions on site and at corporate head offices. This has given Nick an in depth knowledge of all aspects associated with underground mining.



### **STEPHEN BENNETT** **GENERAL MANAGER FLEET**

With a Graduate Certificate in Management and over 35 years mining experience in a number of disciplines, Steve started his underground mining career tapping into his mechanical engineering background from hands on to management in both surface and underground operations covering narrow vein stope mining to shaft sinking, block caving and stoping operations both nationally and abroad. Steve has a strong interest in and has been instrumental in setting course content and facilitating numerous leadership, coaching, mentoring, supervisory and maintenance training programs across a number of countries.



### **ROBERT PETTIT** **ASSOCIATE DIRECTOR, INTERNATIONAL OPERATIONS**

Robert is a seasoned mining professional with over 30 years mining and civil mining experience, with the past 18 years in various management roles. He started his mining career in 1989 on Western Deep Levels in South Africa. He obtained his National Higher Diploma in Metalliferous Mining in 1993 and his Mine Managers Certificate in 1998. In 1998 he joined Cementation Mining in South Africa and started his mining contracting career as a Master Sinker. Robert joined RUC in 2010 as a project manager for the HATS project in Hong Kong.



### **STEVE COOKE** **GENERAL MANAGER, INCYCLE**

Steve Cooke (Cookie) has been in the concrete construction industry for some 35 years. Predominately starting his career in the building trade and Managing a number of building company's. Looking for a change in direction, he entered the concrete construction and underground shotcrete industry. Cookie has held a number of Operational positions within the shotcrete industry over the past 25 years and has built up a reputation as someone that will deliver a project safely, professionally and on budget.



### **NICK CHERNOFF** **MANAGER BUSINESS DEVELOPMENT**

Nick Chernoff is the Manager of Business Development for RUC, He joined RUC Cementation Indonesia in 2017 as Project Manager at Freeport McMoRan's underground operation in Papua Indonesia. The role managed the production and development at the Big Gossan underground mine as well as two cable bolting contracts. Nick led a team of 625 personnel, comprising of an expatriate and majority national workforce. A West Australian School of Mines graduate, Nick has an uncompromised priority for mining safety and a passion for development of the business' most important asset – it's people.



## MECHANISED MINING

**Operators face a number of challenges as they strive to exploit ever deeper and more complex orebodies.**

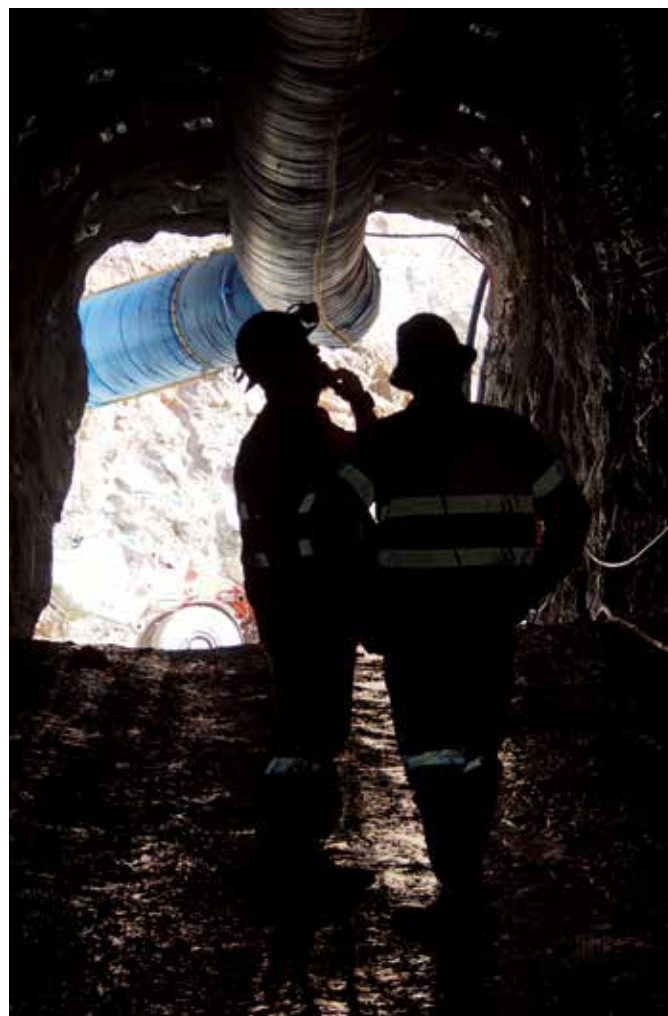
Realistic development and extraction rates must be achieved, whilst ensuring that the quest for an incident-free safety record is in no way compromised. For this reason, mine owners are increasingly turning to the more highly mechanised mining solutions, as offered by RUC Mining.

Mechanised mining offers the best of both worlds—rapid development with faster access to new reserves, and far fewer personnel involved at the active face. It means that owners can be generating revenue earlier in the life of the mine, whilst enjoying the productivity, cost and safety enhancements that mechanised mining brings.

By working with RUC Mining, owners profit from the increased efficiency of modern, technologically advanced equipment, together with the expertise of a highly-skilled workforce.

The company has been heavily involved in providing skilled operators throughout Asia- Pacific into Southern Africa and recently to central Asia productive.

These personnel bring with them years of experience in developing and achieving highly effective mining operations to optimise the benefits that come from mechanised mining.





## THE TRAINING ACADEMY

**An investment in knowledge pays the best interest and an investment in training delivers the greatest dividends’.**



Greg Miller  
RUC Mining  
Managing Director

**RUC Mining is currently building our Shaft Sinking Training Academy within the confines of our Kalgoorlie Service Centre facility.**

The impetus to create the Training Academy, was to provide a solution to the industry wide skills shortage, particularly in the underground mining and shaft sinking space by providing an avenue for people within the industry to upskill and to provide an avenue for new to industry Employees to develop a career in underground mining.

With an initial focus on shaft sinking. An assessment of our people needs to service our upcoming works and future works has made this an imperative for the business and we are investing heavily in being self-reliant when it comes to servicing our future human resources needs.

As a wise man once said ‘an investment in knowledge pays the best interest and an investment in training delivers the greatest dividends’.



## THE WORKFORCE OF TOMORROW

**Creating the next generation of underground miners**

**The Training Academy is conveniently based ‘in house’ at RUC Mining’s Kalgoorlie Service Centre. This purpose-built facility including classrooms and an actual operating shaft, will be a state-of-the-art training center complimented with virtual reality capabilities so the students can visualize the actual project they will end up working on.**

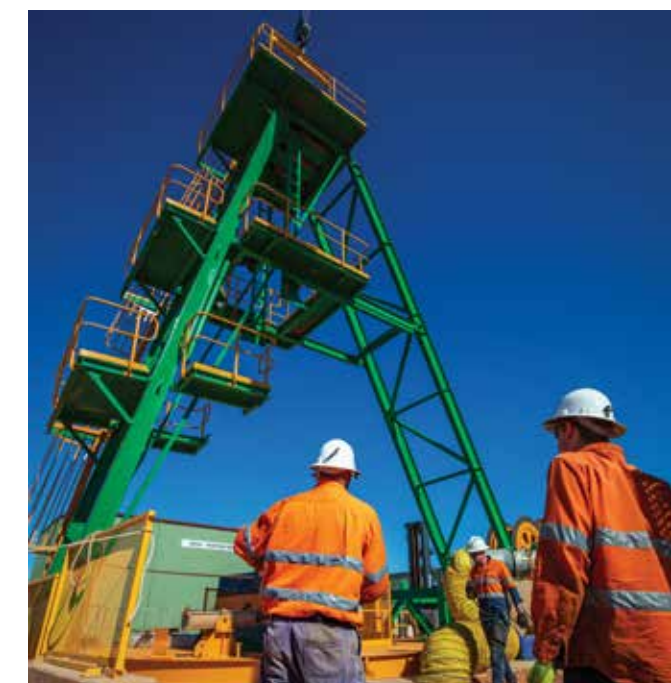
The training and assessment will be both theory and practical based. Each new recruit will be trained to work safely, efficiently and inline with modern shaft sinking practices. Once the shaft sinking Trainee has been deemed competent by our experienced RUC mining assessors they will then be mobilised to our projects.

This extra exposure gives the newcomer a well-rounded education in a safe, supervised environment adding to their overall knowledge of RUC Mining and provides them with an overview of the career opportunities available to them.

The recruitment strategy also includes a focus on Aboriginal and Torres Strait Islander people. RUC Mining is offering sponsorships to community organisations in return for candidates to join our cadetship programme. This interaction has allowed RUC Mining to build strong relationships with indigenous foundations giving us the opportunity to bring more indigenous recruits onboard. More importantly this relationship allows us to provide opportunities for indigenous youth to gain full time employment, thus improving (where required) their social skills and mental health.

Currently RUC Mining are already creating the next generation of underground miners with our successful Cadetship Program. This program will neatly dovetail with the Training Academy whereby RUC Mining can attract young school leavers through to mature age candidates (or trainees) with our strong and supported learning culture. The cadetship program boasts a 71% retention rate and of those cadets that complete the program 100% have secured full time positions. We have cadets in Western Australia and Tasmania to date and will continue to build on the program.

**The long-term mission is to reaffirm that RUC Mining is foremost an exceptional underground mining contractor, more importantly it’s a company actively building the mining workforce of tomorrow.**





## SHAFT SINKING

**Shafts are a core component of many underground mining operations—an activity that sits squarely in the critical path of the project manager’s schedule.**

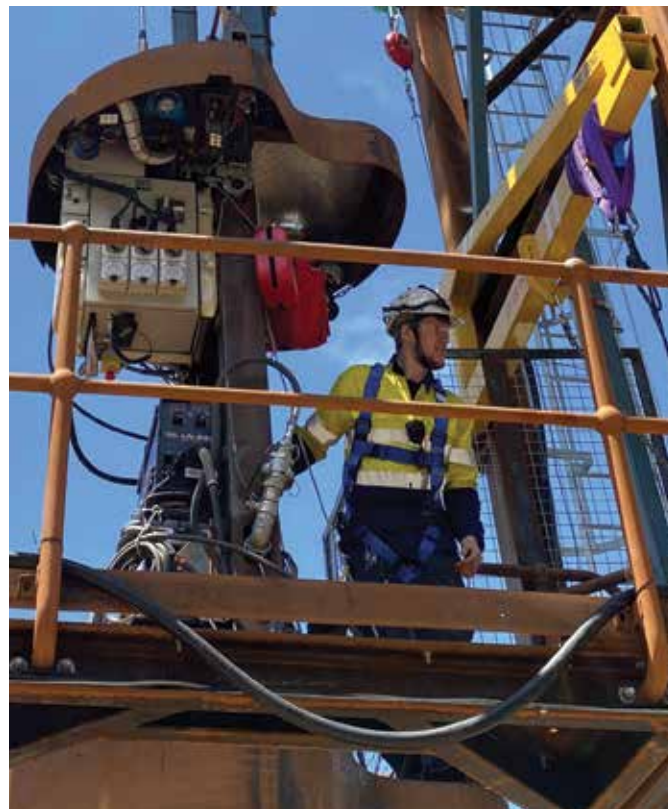
Traditionally, it has always been one of the most challenging of operations, and for that reason it remains the preserve of specialist contractors like RUC Mining.

Challenges include restricted working space, tight timelines, underground water ingress, rigorous design and QA/QC requirements, together with geotechnical considerations, all of which have the potential to impact on the success or failure of the operation. Risks associated with the activity comprise not only schedule and cost but also safety—particularly the risk of falls. As a result modern techniques focus on improved safety and risk mitigation.

RUC Mining brings a huge range of experience and expertise to the discipline, gained from sinking and equipping some of the largest diameter shafts in the world, often in the harshest conditions.

The company has sunk shafts in environments ranging from the remote highlands of Papua, Indonesia to the dense conurbation of Hong Kong.

RUC Mining provides a turnkey solution for shaft projects, utilising other core skills of the business to deliver a final constructed hoisting solution.





## RAISE DRILLING

**Demand for raise drilling is increasing, as mine operators constantly seek productivity improvements without compromising safety imperatives.**

RUC Mining is regarded as the industry leader in this specialised area, with extensive experience across the widest range of conditions.

With 21 operating rigs suitable for every situation, the company is in a unique position to deliver the most effective solutions, whether raise drilling of vertical shafts, or vertical and inclined drilling of boxholes.

Applications include pilot hole reaming for shaft sinking, escape rises, ore passes, ventilation shafts and slot raises.

There are few innovations that have given miners as many benefits as modern raise drilling.

By reaming rather than blasting, smooth-walled bores are created that may need little or no ground support. Diameters can range from 0.66m to over six metres, with pinpoint accuracy delivered up to 1,000 m or more in depth.

The implications for safety and manning levels are just as impressive. By using non entry methods, no personnel enter the hole during boring, no blasting takes place, and there is limited exposure to falling rocks or harmful exhaust fumes. With only two operators generally required per shift, cost benefits are obvious – raise drilling is by far the cheapest, safest and most cost-effective approach to creating vertical and sub-vertical openings in mines and construction projects.



## LARGE DIAMETER HOLES

RUC Mining holds the record for the largest completed raise drilled excavation in Australia of 930 m at 6.0 m diameter.

We are the leading contractor in the industry when it comes to drilling long raises at large diameters.

## ACCURACY & PRECISION

RUC Mining constantly strives to create new industry benchmarks for accuracy and precision in raise drilling.

At the Oyu Tolgoi development in Mongolia, the company succeeded in drilling a ventilation raise with a final deviation of just 20 mm over a 1,300 m raise – a variation of less than 0.002%.





## SPECIALIST GROUND SUPPORT GROUTING & CONSTRUCTION

**Effective ground support is perhaps the most important factor in ensuring the ongoing viability of underground mines – it follows therefore that mine owners must extract the maximum performance from every system component.**

As one of the largest installers of cable bolts in the world, RUC Mining is at the forefront of specialist ground support providers, helping clients to achieve productivity gains, whilst ensuring that safety is never compromised.

Operating with a fleet of specialised ground support and service machines, RUC Mining is able to install, tension and pressure grout all types of ground support, whether cable bolts, resin bolts, split sets, grouted dowels, steel straps or mesh.

Together with the company's wholly owned subsidiary, InCycle Shotcrete, RUC Mining also delivers remote high-quality shotcrete and concrete solutions, either sprayed directly or as part of an integrated system over mesh and rockbolts.

In moving to eliminate hazards, RUC Mining has embraced the adoption of full and semi mechanised systems for bolting and spraying. With both high and low profile machines, holes are drilled and bolted in rapid sequence in accordance with mine plans.

The company's remote spray units (including vertical shaft spray units) have gained rapid acceptance within the industry by eliminating the need for personnel to enter shafts or unsupported drives,



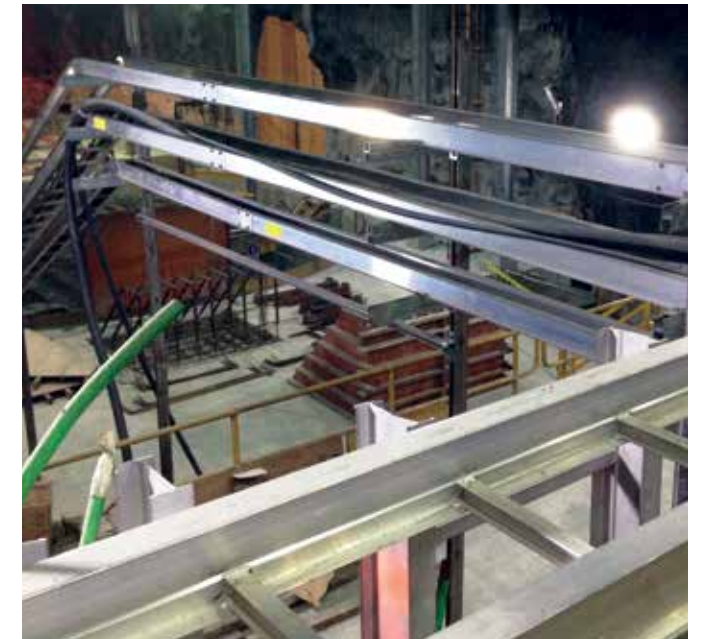


## UNDERGROUND CONSTRUCTION

**With the widest range of technical skills and expertise gained throughout the Asia-Pacific region, RUC Mining is ideally placed to deliver the full range of civil, mechanical, electrical, structural and installation services for all underground mining projects.**

Underground construction is a highly specialised area where safe work practices and detailed planning are non-negotiable. The work is distinguished by the requirement to achieve pinpoint accuracy first time, usually in time critical environments where the quality of the excavation is paramount.

Whether the client requirements are the installation of internal hoists, electrical substations, ventilation fan systems or the construction of sophisticated ore handling and conveyance systems, RUC Mining brings exceptional skills and value to the operation.





## BOXHOLE BORING

**With safe boring techniques an imperative in underground mine development, boxhole boring provides a mechanised, non-entry solution for the excavation of stope slot rises, ore rises, through passes and ventilation passes.**

Where access to the upper level is limited or not possible, the boxhole boring machine sits at the lower level, and a raise is bored upward.

Cuttings fall under gravity and are deflected from the machine using a muck chute.

RUC Mining has a range of drills available to complete boxhole boring safely and quickly, with a capability of up to 50 m in length and 1.5 m in diameter. Boring can be completed with or without a pre-drilled pilot hole, either vertically or inclined down to 45° from the vertical.





## MASS EXCAVATIONS

**Successful installation of static underground equipment such as crushers, rock breakers, conveyors and associated storage areas depends principally on the quality of the preceding excavation work and the related ground support.**

Unlike advancing a decline for truck haulage, large excavations are civil engineering projects, and require the same disciplines that pertain to sophisticated above ground constructions. Because of the company's total commitment to engineering excellence, RUC Mining has been awarded a number of large projects within Australia and overseas.

Excavations have been created for the installation of facilities such as crushing stations, ore bins, loading stations, hoists, workshops and pumping stations. Prior to excavation, the company reviews the design specifications to select the correct choice of technique, whether handheld or mechanised, to meet the required excavation tolerances.

RUC Mining understands that to ensure subsequent construction activities progress without delay, all work must be completed to a high degree of accuracy. Design tolerances are invariably tight, so supervisors demand rigorous adherence to the design plan, and constantly survey and review operations.

Combined with the specialist ground support expertise that RUC Mining brings to a project, the end product achieves full compliance to all specifications. It means that clients can enjoy the quality and schedule benefits that come from a project that is 'right first time'.





## AUTOMATION AND MINING TECHNOLOGY

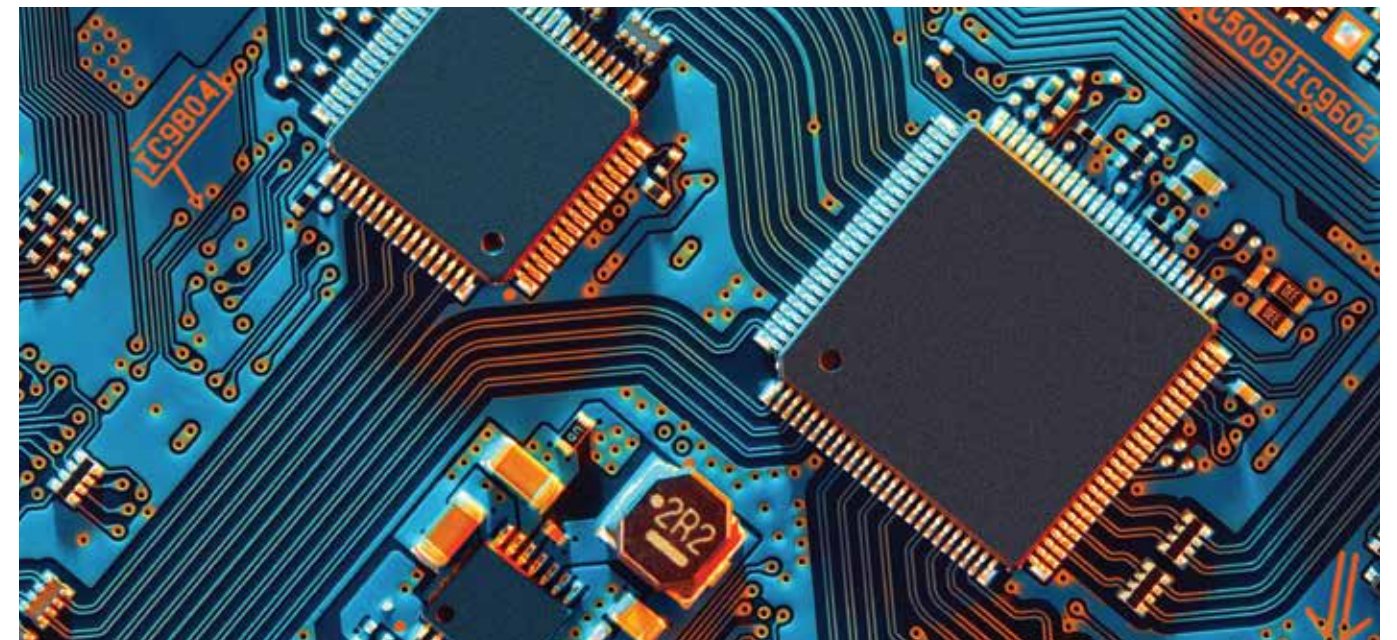
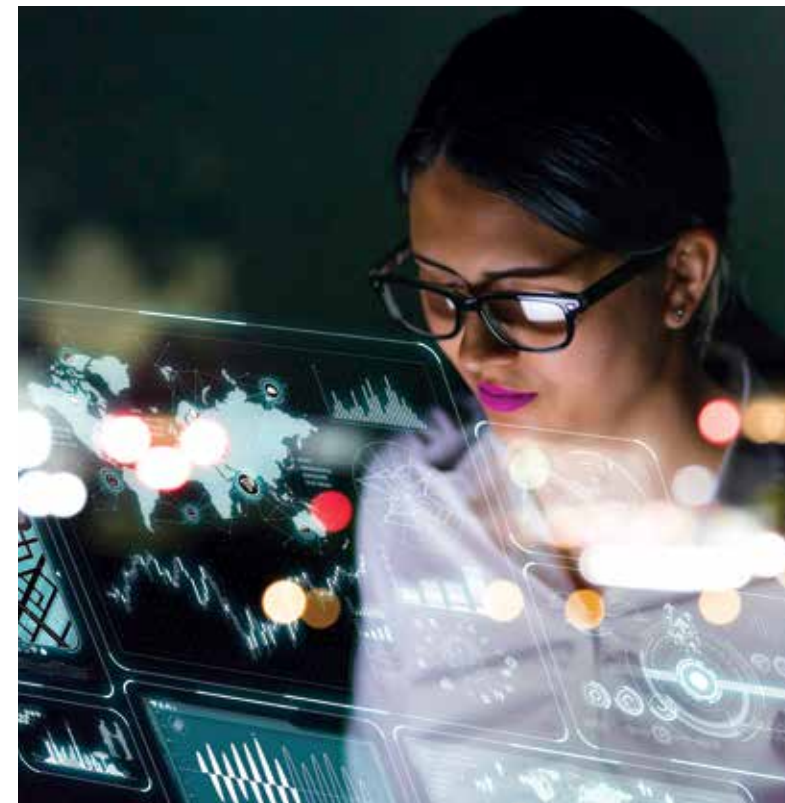


**Mine operators are constantly seeking operational improvements, and by the application of wireless and fixed fibre optic technology, RUC Mining is making significant progress down the digitalization path.**

With a highly skilled, high tech in-house technology partner, RUC Mining is in a unique position to not only promise to deliver a “Digital Mine” but are actually delivering on this promise.

From design to installation of above and below ground communications networks to heavy vehicle and drill automation (remote, guidance control systems).

We also provide site based highly skilled remote technology specialists, to support our installed systems and deliver ongoing continuous business improvement through productivity gains by ensuring maximum upload time of the autonomous fleet, (getting more of the 24 hours day).





## KALGOORLIE SERVICE CENTRE

**Situated in the iconic home of gold mining in Australia, RUC has established a world class service centre in Kalgoorlie, Western Australia.**

**Raise drill operations and warehousing are managed from this facility.**

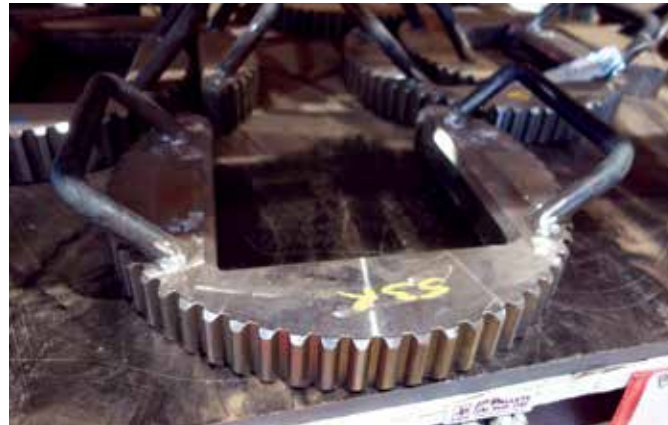
In addition with full capability across engineering, fabrication, mechanical, machining, HV electrical and auto electrical disciplines as well as fixed workshops housing overhead gantries up to 25t, RUC Mining has the capacity to undertake full rebuilds for all of our static plant including winders, raise drills and mobile fleet.

Being located in the geographic centre for most of our projects provides for a service unmatched by our competitors. Situated in the iconic home of gold mining in Australia, RUC has established a world class service centre in Kalgoorlie, Western Australia.

RUC Mining even has the capability to manufacture the Strata series of raise drills and boxhole borers from this facility and have done so with ten drills manufactured to date.

Having freight connections that allow triple road trains door to door to most sites from Kalgoorlie provides an enviable advantage in terms of site mobilisation and logistics.

Our fully stocked warehouse provides 24/7 support to the projects with a large inventory of high use items as well as strategic spares.







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