

THIESS

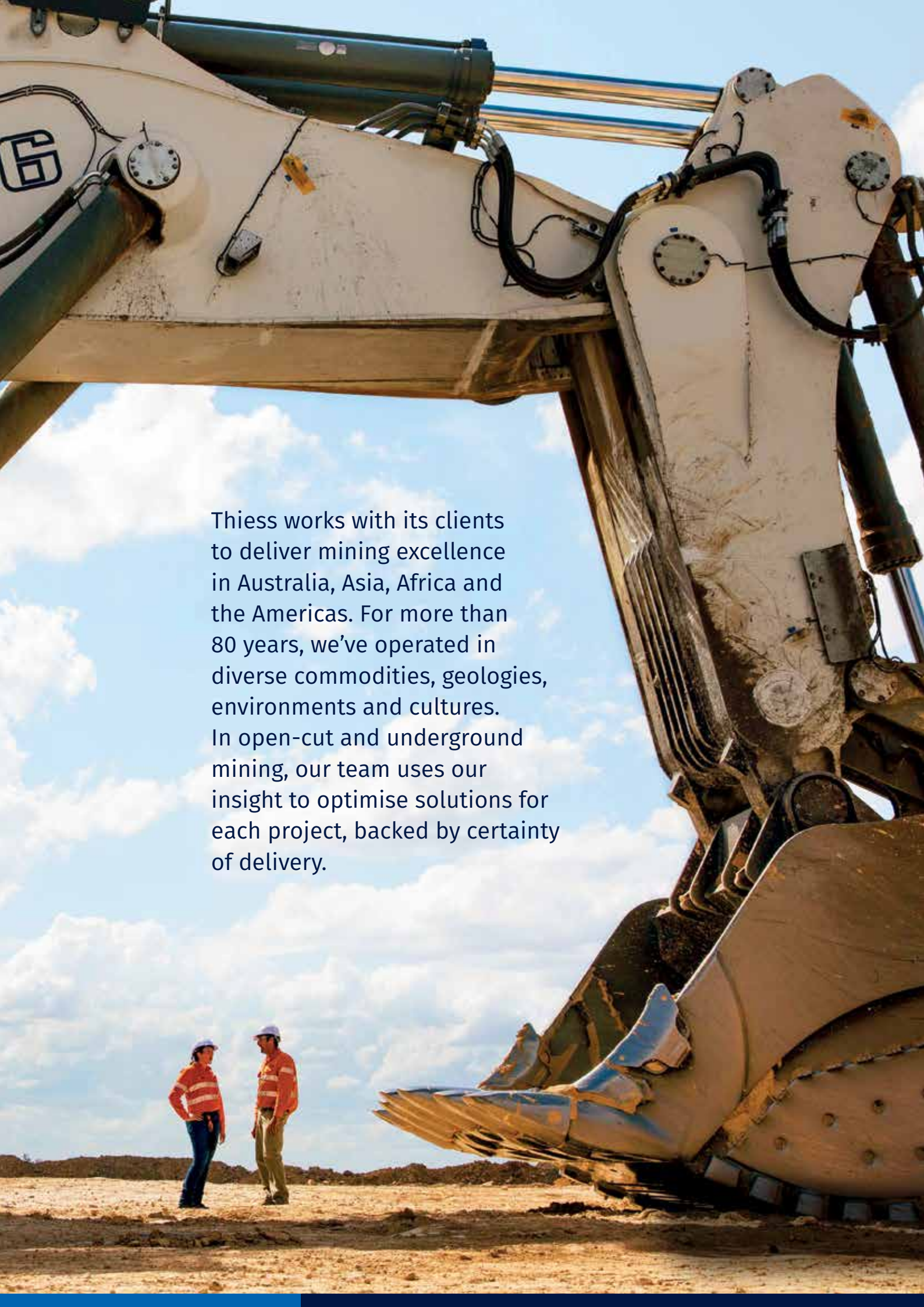




THIESS

EBHERR
EX2509

99



Thiess works with its clients to deliver mining excellence in Australia, Asia, Africa and the Americas. For more than 80 years, we've operated in diverse commodities, geologies, environments and cultures. In open-cut and underground mining, our team uses our insight to optimise solutions for each project, backed by certainty of delivery.

Global insight/ local value

Every project benefits from our 'living' global knowledge bank and the widest range of in-house capabilities and innovations. We then focus that depth and diversity of insight on local value – on and off site. Finely tuning mine engineering using leading thinking and applying advanced technologies. Managing complex logistics, from labour to access to weather impacts. Championing environmental performance for a positive future. Tailoring resourcing strategies to support local employment, training and business outcomes. Global, paired with local, drives mining excellence specific to each client.

Optimised solutions

We are passionate about working alongside clients, bringing an innovative mindset to what we do and turning ideas into reality. Our industry experts are experienced across the mining value chain, optimising each aspect of mining from an integrated perspective. As mines present new and evolving requirements, we have the flexibility to draw in a fit-for-purpose team of specialists to collaborate on solving problems and achieving tailored solutions. From one-off solutions to our end-to-end offer, our world-leading technical capability empowers optimal, economical and sustainable resource recovery.

Certainty of delivery

We precisely select mining methods and equipment via mine plans that expertly address site conditions and maximise on-schedule resource recovery. Throughout delivery, our field teams draw on our extensive engineering support and proven systems to fast-track problem solving with rigorous cost and schedule control. Our technologies give decision makers access to near real-time operational data. And excellence in people, safety, environment and community management contribute to saved time, reduced risk and cost, and greater surety of results. In all, greater certainty empowers our clients to reach their objectives in an ever-changing market.



Mining is dynamic. As an industry, we're delivering digital advances to transform how we work. We're building and powering communities and enterprises. We're making possible technologies that didn't exist even a decade ago. We're continually breaking new ground. That's what our clients do every day – and that's where Thies's role begins.

We work with our clients to deliver mining excellence in Australia, Asia, Africa and the Americas. For more than 80 years, we've operated in diverse commodities, geologies, environments and cultures. In open-cut and underground mining, our people channel that global experience and insight to create advantages for each project. A mine plan that unlocks new reserves. A smarter fleet. A sharper operations culture. An upskilled team. A community engaged.

While we thrive on sharing what we know, each mine faces unique challenges and opportunities. The real impact comes from understanding our clients' needs and continually learning and improving with them. From project inception through to operations and rehabilitation, our skilled team welcomes the pursuit of the best, tailored solutions. We work with our clients to safely position their operations for optimal efficiency, productivity and cost performance.

Expertise and solutions are then brought to life by how we meet our commitments. Our clients know we deliver under all market conditions and that we finish what we start. For our team, sustainable and profitable resource recovery stem from that certainty of delivery. Through our safety culture, repeatable processes, technology integration and more, our purpose to create lasting value begins. And that's because what excites us is the future and where we will go with our clients, communities, partners and people.

Open-cut mining



Our history in open-cut mining is one of pioneering. We've developed innovative contracting models, proven new equipment solutions and led the development of new techniques and methodologies to improve economic, social and environmental outcomes for clients, partners and local communities. Eight decades of know-how meets with tailored analysis and our ability to challenge and optimise to ensure the right strategies guide action. We then combine our full-service capability with that of our global strategic partners and sourcing strength to deliver excellence across the mining lifecycle.

Underground mining



Thies's offers more than 50 years' underground mining experience, having developed and operated some of the most complex underground mines in the Asia Pacific region. From narrow vein to large open stope extraction, across diverse ground conditions (including high-stress seismic environments), our team's proven skills run deep. From specific services such as shotcreting, through to technologies such as tele-remoting and real-time air monitoring, we tailor our capabilities to each mine to maximise efficiency and productivity with the utmost focus on safety.

Multi-commodity



Since Thies's start in coal, our expertise has grown to include most of the world's commodities such as metallurgical and thermal coal, copper, diamonds, gold, iron ore, nickel and oil sands. In underground, our experience spans copper, gold, nickel and, historically, zinc and uranium. Clients benefit from our commodity-specific expertise and transferable advantages from our multi-commodity capability. The result is a precise, proven solution for each of our clients that considers commodity-specific principles and requirements, while leveraging a much broader suite of learnings and achievements.

Engineering


Technical studies

Thiess uses widespread knowledge from decades of in-field experience across a range of commodities and mining methodologies to deliver tailored, flexible technical studies. These include advanced mine modelling, financial modelling and commercial frameworks, and opportunities analysis and optioneering of technologies and methods. Our study services range from high-level, early stage scoping assignments on greenfield projects, to detailed technical studies geared for immediate implementation on operational projects, to peer review of client or consultant-developed studies. They span areas such as geological and geotechnical engineering, mine design, mine scheduling, drilling and blasting, plant and equipment selection and staging, operations sequencing, mine infrastructure, and preparation works. Each study is optimised by field-proven engineering principles and assumptions, with the added rigour of a team ready to take responsibility for delivering on promised outcomes.

Design

Our practical, life-of-mine expertise provides the strongest foundation for operations because we design based on direct experience across the full mining lifecycle. Our flexible, responsive design services scale up to detailed design engineering and management, including geotechnical engineering, geological modelling and geomechanics.

Through mine optimisation and optioneering, we further challenge every aspect of a design to ensure short and long-term goals are based on sound, fit-for-purpose economics. A sharper ramp design. A superior strip width. A better and more flexible method. For clients, our multi-disciplinary, specialist skill, matched with our deep, pragmatic operational experience, translate into operations that safely maximise resource recovery with schedule certainty, operational efficiency and optimised value chains.



Thiess' mine engineering services are the backbone of our work, centring on a total mine development solution for clients.



Planning

Thiess' world-leading, life-of-mine planning provides the foundation and economic direction to support robust short-term delivery and long-term value. We work closely with our clients to optimise production outcomes, balancing mine life, resource recovery and unit cost targets, with our clients' priorities, schedules and market demands. This drives superior results in:

- Short-term scheduling through to lifecycle staging
- Mine/pit development and ongoing mining methodologies
- Drill and blast volumes and techniques
- Plant and equipment selection and associated haulage
- Productivity and product recovery optimisation
- Fixed assets, mobile fleet, personnel and overhead requirements.

Proven systems give supervisors ready access to information to make informed, agile decisions and effectively manage change on site, with remote technical support from our in-house team of multi-disciplinary experts.

Estimation

Our robust estimating capability delivers fully costed mine plans that give clients economic certainty. For technical studies, new mine plans, extensions and what-if scenarios, our team's detail and rigour ensure high confidence in cost profiles and production forecasts. Our skilled team of dedicated estimators are mine engineering experts in their own right, with deep operational experience.

They are part of a multi-disciplinary mine planning team that tests thinking to refine strategies and identify the best options. Detailed costs are analysed and benchmarked against our extensive knowledge bank of diverse operations, further reducing unknowns and contingencies to create a total mine planning package that positions projects for superior, long-term project performance and economic success.

Feasibility and life-of-mine study

MOUNT PLEASANT, AUSTRALIA



Thiess delivered a critical feasibility and life-of-mine study for our client at our Mount Pleasant project. Our team reconfigured the design for a high-intensity mining sequence using small pits for better control over the strip ratio. The smaller pits enabled more efficient haulage by designing a geometrically efficient and more community-friendly road network. Thiess' strategy meant operations could deliver significant short-term gains from a temporarily high-graded mine, followed by sustainable, long-term improvements as the mine's geometry reduced haulage.

Innovative mine schedule

ROCKY'S REWARD, AUSTRALIA



For Rocky's Reward, a key BHPB Nickel West project, Thiess delivered an innovative mine schedule to maximise nickel ore output in the shortest possible time. Our team used innovative mine planning software and a 3D pit model to run detailed scenarios and quantify the effect of complex geology on the schedule. This included looking at the effect of the pit's voids on the schedule and how to best work around them. The resulting low-cost pit optimisation solution included ramping systems and in-pit and dump sequencing – made possible by the advanced analysis.



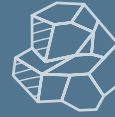
Drill and blast

Our capability spans technical, drilling, plant and equipment, product supply, and explosives loading. And our experience spans diverse environments in open-cut and underground contexts such as:

- Multi and steeply dipping seams using through seam blasting techniques
- Hot and reactive ground, and faulted and complex geology
- Seismically active, high-stress underground operations
- Populated and environmentally sensitive areas, and near vibration-sensitive infrastructure.

We tailor solutions to each mine's requirements, challenges and opportunities, supported by the latest third-party and our proprietary design and execution technologies. Solutions are then delivered with certainty via our proven systems and processes, supply chain strength, and product quality. These are strengthened by the use of a site-specific mix of advanced technologies, including high-precision global positioning system guidance and drill monitoring, for greater drilling precision and more consistent and efficient blasts with improved resource recovery. Our integrated approach between our experienced, site-based drill and blast engineers, operators and maintainers; our in-house drill and blast specialists; our wider multi-disciplinary technical team; and our strategic partners and suppliers provides the final piece in maximising resource recovery and optimising productivity and production – safely and consistently.

Precise drill and blast operations lay the foundation for cost-effective mining as they influence the quality of most downstream mining activities.



Load and haul

We deliver fully resourced load and haul solutions across diverse commodities, pit sizes, complexities, methods and conditions. Our experience in all aspects of daily site life also offers greater flexibility to clients – in people and their health and safety, mine management systems and processes, asset management, commercial administration and reporting, environmental and community management.

Thiess' reputation for managing diverse mining environments, particularly complex ones, is underpinned by precise, field-proven logic and efficiencies established across several decades. Field teams track key metrics in near real-time to continually analyse performance and drive better tactical choices. And every project gains the advantage of our multi-mine insight, providing a running start on improvement and innovation across the life of each mine.

We optimise safe, efficient haulage through expert haul road design, fleet scheduling and management. This delivers the right quantity and quality, to the right destination, at the right time, with certainty. Our experienced field teams also draw on our extensive in-house technical and functional support for faster turnaround in problem solving and service delivery.

Whether establishing a new mining operation or optimising an existing mine, our goal is to empower cost-effective resource recovery and ongoing success.



World-class assets

GLOBAL OPERATIONS



Load and haul is core to what Thiess does. Every shift, every day, every week, our expertly skilled operators move millions of tonnes of waste, coal, and ore on sites across our global operations in Australia, Indonesia, Chile, and Botswana.

Thiess' continued investment in the world's best equipment including ultra-class mining fleets such as Liebherr 9800 excavators, Caterpillar 797 and 794 trucks as well as Liebherr 282 trucks provides our clients with world-class load and haul capability.

Thiess partners with leading suppliers to improve component parts, like tray bodies, to enable reliable, efficient and productive removal of overburden; and transportation of coal and hard rock to processing plants.

Through-seam blasting

MOUNT OWEN, AUSTRALIA



Thiess' through-seam blasting has helped overcome Mt Owen Mine's complexities and unlock economical mining. The deposit comprises multiple, often steeply-dipping, coal seams mined in thicknesses between 0.3m and 11m.

An electronic initiation system optimised blasting and reduced thin coal seam disruption. High precision drill guidance and strata recognition enabled more accurate coal flow forecasting and scheduling.

The results – more efficient excavation, higher resource recovery and reduced costs – seen as best practice globally. The technique has also unlocked satellite pits.

Assets

Asset management

Thiess manages, operates and maintains a \$6.6 billion mobile equipment fleet – one of the largest and most diversified for a mining services provider globally. In addition to our significant truck-and-shovel fleets, our portfolio includes low-emission underground plant, technology-enabled and autonomous-ready drill fleets, and the most reliable explosives loading equipment.

Our experience and strong supplier relationships enable us to provide solutions to any client challenge, regardless of scale. We can tailor a solution to meet any need – one machine or multiple; micro-excavators or ultra-class trucks; one month or ten years – helping clients manage the demands of an ever-changing, cost-competitive market. This includes access to the industry's most comprehensive plant hire and equipment ownership packages and innovative capital replacement solutions through FleetCo, a wholly owned subsidiary of Thiess, alongside other leading suppliers. Our team can also provide expert care for client-owned fleets.

Our comprehensive asset management services reduce costs and improve performance for clients – backed by skilled people and rigorous systems and procedures.

Our ability to manage and maintain mining plant and equipment is world-class, focused on reliability, availability, productivity and cost efficiency.

Asset maintenance

Our flexible asset maintenance services are focused on industry-leading and cost-effective equipment performance, availability and reliability. We pair sophisticated systems and processes with our highly experienced maintenance teams across a range of predictive, preventive and run-to-failure maintenance techniques.

Using advanced software, we track production and maintenance time and productivity. We continually monitor the condition of assets, manage dispatch solutions for trucking efficiencies, and capture fleet events in near real-time. These technologies enable us to identify and address potential issues prior to critical failure or cost over-runs, improve safety outcomes for operators and maintainers, and improve the performance and longevity of plant and equipment.

As all of Thiess' mining operations feed into one database, our in-house data science team also works with our maintenance specialists to analyse patterns, share learnings and further improve solutions. Data-based insight helps us cost-effectively increase asset efficiency and manage fleet reliability, and increase asset productivity by informing decisions such as changes to operations, maintenance and capital strategies.

*Darra, Qld,
Australia*



*Balikpapan,
Indonesia*



A powerful network

Thiess' component rebuild capability in Australia and Indonesia supports multiple regions. We also have a network of strategically located, off-site workshops to support major maintenance events. These facilities continue to yield significant cost savings compared to traditional third-party suppliers, without sacrificing work quality or reliability once an asset returns to work.

Rebuilds are completed to OEM standards, including comprehensive testing and quality assurance. Maintenance activities are further bolstered by the ability to rapidly engineer-out common causes of breakdowns. Clients also enjoy availability improvements, productivity gains and innovations sooner through knowledge sharing and the replication of successful systems and processes.

Longstanding global relationships with world-leading OEMs support cost savings, reliability, problem solving and product improvements, and connect clients with the latest in next generation mining equipment. Our network of major equipment suppliers and hire companies, including competitive tyre supply agreements, further guarantees parts and supply inventory availability at the best prices and highest standards.



Hazelmere, WA,
Australia

Maintenance service efficiency program

AUSTRALIA



Thiess' plant team identified preventative servicing of haul trucks as a major improvement opportunity due to maintenance frequency and costs. The team designed and implemented an industry-first, proactive service efficiency program improving maintenance planning, preparation and execution. The initiative introduced new maintenance strategies, like simplified service sheets; new processes and behaviours, using Lean/5S; and new tools and technology, via a world-first modular structure. It has significantly reduced service labour, durations and costs, while improving safety and production certainty.

Site mobilisation

UKHAA KHUDAG COAL PROJECT, MONGOLIA



Thiess used modern mining equipment, systems, processes and skills to rapidly transform the Ukhaa Khudag Coal Project from barren landscape into a world-class mine in just two years. We mobilised a large equipment fleet across the Gobi Desert to ramp up the project – a major feat with virtually no roads or other infrastructure. Our team used simulator, classroom and hands-on training to upskill a national mining team of more than 700 people to successfully, safely and efficiently operate a 10Mtpa, large-scale mining operation to global best-practice standards.

Rehabilitation

Design and planning

Our team's comprehensive, integrated and tailored rehabilitation approach creates advantages for our clients. We design outcomes that meet end land use objectives, comply with regulatory obligations and address long-term closure requirements. Each solution is tailored to each mine and each client's needs, from large-scale, complex campaigns to smaller, specialist work packages.

The strength of our design skills and experience are best demonstrated through the impressive, award-winning results we have achieved with clients over several decades. We support rehabilitation outcomes from the earliest development stage of a project through to its operational phases. Our industry-leading team of planners, engineers and environmental experts work together to develop optimised rehabilitation designs that reduce operating costs for our clients with no compromise to quality outcomes.

Client value is further extended as our team stays abreast of emerging environmental trends, ensuring we are ready to implement the latest, research-based advances in rehabilitation design.

Construction

Together with our clients, we deliver world-class rehabilitation programs that meet approval requirements and stakeholder expectations. Our environmental specialists and operational teams use our optimised designs as the foundation for progressive rehabilitation delivery. Rigorous processes and strict quality control ensure rehabilitation outcomes follow design, schedule and budget objectives.

Our rehabilitation construction services include bulk profiling and shaping of mine spoil; construction of water management, erosion and sediment control structures; final surface preparation and topsoiling; and tailored revegetation programs. Because our environmental personnel work as part of our technical planning team, rehabilitation works are fully integrated with wider mine plans. This provides advantages such as reduced materials movement, minimised rehandling, improved productivity, reduced construction costs, and improved environmental outcomes. The result is high-quality rehabilitation programs, often completed ahead of schedule.



Monitoring and maintenance

We leverage the latest technology to drive greater efficiencies and consistency in rehabilitation campaigns, particularly in monitoring and maintenance. Our specialists can accurately monitor rehabilitation success, reviewing vegetation health and diversity, and identifying erosion, using drones to capture footage of rehabilitated areas. This technology cost-effectively provides a complete overview of large areas of land, delivering a more accurate picture of rehabilitation performance. It also complements and reduces the need for time and cost-intensive field monitoring.

Another advantage of our rehabilitation monitoring is that it quickly identifies areas that need further targeted, cost-efficient and environmentally effective remediation. Clients ultimately gain a strong body of evidence of their rehabilitation outcomes, supporting progressive certification of rehabilitated land and reducing ongoing rehabilitation liabilities.

Thiess is committed to our clients' drive to efficiently deliver rehabilitation results with lasting environmental value.

Optimising waste dump rehabilitation

SANGATTA COAL MINE, INDONESIA



Thiess' rehabilitation services at Sangatta Coal Mine follow an integrated process including planning and testing, material encapsulation, overburden smoothing and topsoil ripping. More than 1,677 hectares have been successfully rehabilitated since 2003 via large, annual campaigns. Working closely with PT Kaltim Prima Coal, our team carefully stages re-contouring to ensure slope stability. Topsoil ripping is designed to increase infiltration and control erosion. And continual improvement is prioritised, including the design of equipment upgrades so dozers can work safely in wet conditions – critical in a high-rainfall environment.

Rehabilitation comes before coal

MOUNT PLEASANT OPERATION, AUSTRALIA



The Mount Pleasant Operation has some of the most stringent environmental requirements in New South Wales. Our team commenced rehabilitation works early in the life of the mine to mitigate visual and noise impacts for the local community. A natural landform approach is being followed, including contours, peaks and valleys. Early work includes an open grassy woodland with native grass, trees and shrubs; cover crop to stabilise the soil and minimise dust impacts; and an innovative mix of rock piles and tree hollow stands to accommodate and promote a habitat for local fauna

Sustainability

Thiess' purpose is to create lasting value. We integrate environmental, social and governance factors into our decision making and all aspects of our business. At the core of our approach to sustainability is being a trusted services provider to clients, partners, suppliers, communities and wider stakeholders.

Our focus on sustainability drives our commitment to:

- Support safe communities and provide safe, supportive and positive workplaces
- Act with integrity, operate honestly and respectfully, and seek sustainable supply chain outcomes
- Promote a culture that builds capability, and supports opportunities for sustainability, diversity and inclusion
- Target innovation through knowledge sharing and collaboration, and a focus on the future
- Promote environmentally responsible outcomes by using resources efficiently, minimising waste and building resilience to climate risks.

We seek to enhance outcomes at all stages of our clients' operations. We provide flexible support based on what our clients need, and continually look for opportunities to improve outcomes – for individual mining operations and wider environments and communities.



People

Our team comprises industry leaders who contribute their skills, knowledge and experience each day to the benefit of our clients, project partners and wider stakeholders. Our high-performance culture optimises results, driven by a work environment that encourages innovation, celebrates diversity and inclusion, and recognises and rewards excellence. We back our people through development and training programs, so they continually build their capabilities, including supporting the next generation of leaders through tailored apprentice, graduate and employment programs. And the way we attract, develop and manage our teams maintains a strong focus on local relationships and local benefits, based on our wealth of expertise in local training and capacity building.

Health and safety

Our objective is simple – to keep everyone safe every day. Strong leadership with visible, positive role models; industry-leading systems that are consistent and effective; total commitment from our people; and continual improvement and learning, are all part of our safety-first culture, delivering greater performance and reputational value for our clients. We continually challenge our leaders and our people to identify new, innovative strategies for improving health and safety. And we work with our clients to proactively contribute to a safety step change across our industry, globally. Thies's' award-winning lag-to-lead safety transformation program showcases how we are encouraging more effective safety behaviour by measuring and valuing actions that drive positive performance outcomes and deliver improvements before incidents occur.

Systems and processes

Our insight, ability to optimise and assurance of certainty are made possible by our systems and processes. These support better decisions, drive productivity, reduce costs, manage compliance and improve efficiency. Particularly for frontline staff, they also minimise administration effort and empower our people to focus on data analysis and action as we cost-effectively meet operational challenges while delivering maximum flexibility and responsiveness. The Thies's Governance System enables standardisation across our operations and activities to drive operational and sustainability excellence. It provides a starting point for projects to begin operations with a strong governance system in place, with the flexibility to embed specific project, contract and regulatory requirements.

Environment

Industry-leading environmental management is a core capability at Thies's and is critical to helping our clients deliver on their sustainability commitments. We focus on identifying and proactively managing risks to minimise the impact of our operations and those of our clients. Our environmental experts work closely with our wider operations and technical teams to design and deliver integrated solutions that optimise mining operations. This spans areas such as water, impact reduction, air quality, land and rehabilitation management. Our substantial experience ensures projects are positioned to deliver exceptional outcomes – and continuous monitoring, measurement and improvement provide the foundation to ensure positive results.

Analytics and technology

Our people apply advanced analytics and technology to improve data quality and accessibility; support better, faster decision making and task optimisation; rapidly manage production changes and performance; and drive operational consistency, productivity gains and continual improvement. We also use analytics and technology to deliver practical, cost-effective, smart innovations that enable greater efficiency, flexibility and productivity with lower unit costs. Through Thies's' strong relationships with OEMs and technology specialists, we have access to the very latest mining technology solutions. We combine that leading-edge insight with our extensive operational experience to provide a range of autonomous services and assist clients in realising the full benefits of automation sooner.

Community

Thies's recognises and values that our role as a mining services provider is to contribute to sustainable economic and social progress. We collaborate with our clients to support their objectives in bringing their social performance policies to life. We do this by approaching all engagement in a way that positively involves communities and improves their understanding of projects. Building mutually beneficial relationships that lead to opportunities for local people underpins our social licence to operate. Significant social benefits are then made possible through local employment and training, local procurement, engagement with Indigenous affairs and community partnerships – tailored to each project and the regions in which we operate.

THIESS

For more information please contact Thiess:

Head office (Brisbane) – Level 5, 179 Grey Street, South Bank Qld 4101, Australia
T +61 7 3002 9000

Australian offices – Brisbane, Perth

Global offices – Botswana, Canada, Chile, India, Indonesia, Mongolia, South Africa

THIESS.COM