



MAKE YOUR BUSINESS DECISIONS ON A SOLID FOUNDATION.
CHOOSE A COMPANY WITH THE TECHNICAL EXPERIENCE AND COMMITMENT
TO SERVICE EXCELLENCE AND SUSTAINABILITY THAT YOU NEED TO BE SUCCESSFUL.

JUST ASK GOLDER

Key contacts for our mining services can be found on our website: www.marston.com

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ENGINEERING EARTH'S DEVELOPMENT, PRESERVING EARTH'S INTEGRITY.

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GLOBAL MINING CAPABILITY, DELIVERED LOCALLY.

Golder Associates, a global company, provides a comprehensive suite of integrated mining services, from project inception to mine closure. Our wealth of experience, coupled with networked offices in all key mining centers, provides clients with mine planning solutions no matter where the mining project is located.

Meeting mining challenges head-on, we provide full-service mining consultancy specializing in mine planning and geological services for open pit and underground coal mines.

GOLDER'S COAL SERVICES: THE MINING LIFE CYCLE

Our integrated consulting, design and construction solutions can be applied to every stage of your mining project and are provided by teams specializing in:

- Mine planning and reserve evaluation
- Management consulting
- Integrated tailings and waste management
- Rock mechanics and mine geotechnical engineering
- Mine environment
- Mine water
- Mine infrastructure
- Mine energy optimization and carbon management
- Sustainability and corporate social responsibility
- Mine safety



Golder's acquisition of Marston creates one of the **LARGEST geology, mine planning and consulting** practices in the world.



EXPERIENCE

Golder and its consultants have worked and consulted in every major coal producing region in every coal producing country.

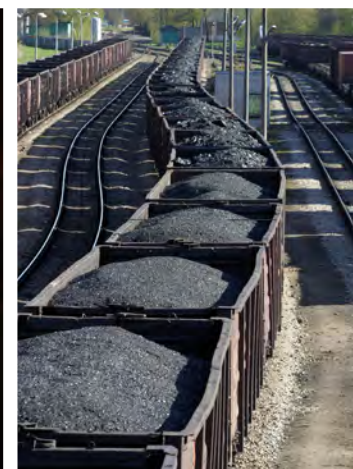
INSIGHT

Golder's consultants are supported by technical and engineering capabilities sufficient to complete the largest and most complex assignments related to mining project planning and economic analyses.

RESULTS

We have been delivering quality technical solutions to the global mining sector for over 50 years. You can rely on the strength of our technical and service excellence, and our global network of specialists in all key mining locations.

Golder solves your mining challenges.



With more than 50 years of experience in coal mining operations, transportation and logistics issues, and coal contracts, Golder can get the job done.

Our integrated consulting, design and construction solutions can be applied to every stage of your mining project and are provided by teams specializing in:

MINING ENGINEERING

Golder has extensive practical experience in all aspects of design, planning and operation of open pit and underground mines. This experience and knowledge assists clients to realize the maximum value from mining projects.

- Bankable feasibility studies
- Surface mine planning
- Underground mine planning
- Geology / resources and reserves
- Permitting
- Environmental compliance
- Materials handling
- Economic analysis

ROCK MECHANICS

Golder prepares mine designs that reflect the expected rock mass conditions that may be encountered. Our designs consider methods that allow for adverse conditions, improve stability and increase productivity.

- Rock characterization
- Rock stress measurement
- Kinematic analysis
- Numerical modeling
- Groundwater impact
- Pit and dump slopes
- Strata control
- Support system audits
- Slope and shaft design
- Monitoring and instrumentation

COAL SUPPLY CONSULTING

Golder is a leader in thermal coal supply consulting, having completed fuel supply projects that are financed, under construction or completed and operating successfully. We cover the full spectrum of coal supply issues.

- Exploration, estimation and certification of coal resources / reserves, and mining and infrastructure
- Coal haulage, barging, shipping, delivery, stocks, handling, preparation and utilization
- Coal sales and transportation contracts

Golder knows all of the issues that affect a power project related to coal and the documents required to make a project bankable. We have solved many issues regarding plants and can provide insight because of our perspective and experience.

MINING CONSULTING

For more than 50 years, Golder has provided consulting advice and studies globally to some of the world's largest mining, energy, industrial and financial corporations.

- Mine management improvement
- Due diligence and valuation
- Operations reviews
- Technical reports including NI 43-101, JORC, SEC
- Dispute resolution and expert witness
- Profit improvement

We have completed fuel supply projects for power plants that are financed, under construction or completed and operating successfully.