



amec
foster
wheeler

Global Mining Solutions

From concept
through closure





Amec Foster Wheeler is an industry leader in global mining solutions. For more than 60 years, we have been trusted to deliver some of the most logistically and technically challenging mining projects in the world.

Front-end consulting

Concept development is the critical first step in making the right investment decision. Our geologists, mine planners, metallurgists, environmental scientists, cost estimators and financial analysts know how to assess a project's value, feasibility, risks and opportunities. We understand mining disclosure standards under Canada's NI 43-101, USE SEC Industry Guide 7, Australia's JORC Code and their respective stock exchange requirements. We know how to address environmental regulations both locally, and to meet international standards such as IFC.

Resource estimating

Amec Foster Wheeler performs audits, preliminary economic assessments, due diligence and reserve estimates on mineral deposits worldwide. We are pioneers in sampling theory and practice, and experts in multiple-indicator kriging, conditional simulation and other geostatistical applications for the reliable determination of mineral resources. Our expertise is routinely sought and universally respected by developers, investors and lending agencies worldwide.

Due diligence and independent review

Our broad and global experience covers the entire life cycle from exploration through closure. Our specialists are retained for due diligence studies and independent technical, engineering and environmental reviews of mining projects.

Mine design

From conventional open pits to block caving, we understand how to select mining methods that maximize ore recovery and return on investment. We prepare dynamic models of mining operations to determine fleet configurations, haul roads and optimum throughput. We use the latest software for mine design, and offer a complete range of geotechnical expertise for slope stability and rock mechanics.

Mineral processing

We are highly regarded for our skills in the effective treatment of metals and minerals. Our process specialists apply leading-edge technologies to deliver successful greenfield projects as well as plant retrofits, improvements and expansions. The breadth of our process expertise includes base and precious metals, potash, uranium, diamonds, oil sands and coal, and conventional, hydrometallurgical and pyrometallurgical circuits. We take our clients' projects from initial sampling and testwork through to detailed process engineering and construction.

Material handling

We provide study, design and implementation services for surface and underground crushing and conveying systems, as well as stockpiles, silos and other storage facilities, ports and shiploaders. Our subsidiary Terra Nova Technologies specializes in the design-supply of stacking, crushing and conveying facilities.



Mining & Metals

Cost estimating and financial analysis

With recent experience on many billions of dollars' worth of capital projects, we have the procedures, historical data and knowledge in place to prepare reliable capital and operating cost estimates of mining developments. Our estimating group is one of the largest, most experienced, and most trusted in the industry.

Our financial and economic analysts offer strong skills in modelling, risk analysis, pricing and commodity guidance, optimization, Monte Carlo simulation and flexible valuation. Early involvement in many high-profile projects, have helped to guide significant strategic and tactical decisions for the benefit of our clients.

Sustaining capital operations

Commodity prices, operating costs, socio/environmental expectations and regulations are constantly changing. Mine and process plant owners must also change if they are to remain profitable in the face of these challenges. We combine extensive operating experience and up-to-date technical expertise to support improvements including mine/plant debottlenecking, capacity increases, and improvements in energy efficiency and water utilization.

Paste and tailings technology

Every mine requires unique tailings management solutions, and we are pioneers in this field. We offer innovative and environmentally sound geotechnical solutions such as dry stacking, paste tailings disposal and co-disposal of tailings and waste rock, tailored to the site specific conditions of each individual project. Our in-house testing lab optimizes cement-based composite mix designs for use in slurry deposition and pastefill systems. We develop technically safe and cost-effective designs that help our clients' mining operations comply with highest safety standards.

Environmental and geotechnical solutions

Our approach to mining projects reduces social and environmental liabilities at the outset. We create innovative and safe solutions to mitigate acid rock drainage (ARD), and to manage cyanide use and recovery. We develop and implement practical mine closure and reclamation plans. We know what it takes to get our clients' projects approved, permitted and built.

Water treatment and management

We design innovative solutions for process water and wastewater treatment at all stages of mine development, operation and closure. In the past decade, we have studied, designed or built nearly 200 water treatment facilities at mines and process facilities worldwide. We are a leader in high-density sludge (HDS) treatment systems as well as conventional lime neutralization plants, arsenic removal, and the treatment of cyanide, thiocyanate and ammonia. In addition, our expertise in geochemistry and surface water and groundwater management can substantially reduce the cost of meeting environmental regulations, and facilitate the permitting process.

150+
year history
operating in over
50 countries

40,000
exceptionally talented
people worldwide

Project delivery

From the Indonesian rainforest to the Peruvian Andes, from the Canadian Arctic to the Australian outback, Amec Foster Wheeler delivers. We know how to design and build successful projects safely, on schedule and within budget. We have the construction and project management resources to tackle projects of any size. We have proven software and procedures for risk management, HAZOPs, and schedule and cost monitoring and control.

We offer a full range of procurement services to provide our clients with the lowest possible prices; highest quality control; and the best delivery times. Each year, we visit hundreds of suppliers and manufacturers in North and South America, Asia and Europe, sourcing billions of dollars' worth of equipment and materials for our clients.

We have been responsible for project logistics and transportation infrastructure in some of the most remote parts of the world. Our experience has shown that logistics represents a significant portion of overall project costs, and is a critical factor in project success.



We are focused on delivering consistent value to customers with safety and integrity in all we do.



Connected excellence In all we do

For more than 60 years, Amec Foster Wheeler has provided a full range of services for mining projects, from front-end geology and environmental consulting through to design, project and construction management, operations support and mine closure.

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Oil & Gas | Clean Energy
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amecfw.com/mining
mining@amecfw.com

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