Macromet is a metallurgical consultancy based near Perth, Western Australia. We provide professional consulting services to the extractive metallurgical industry in a heuristic, innovative and cost effective manner.

Our core business areas include:

- Process plant technical reviews and operational troubleshooting/de-bottlenecking.
- Client representation during feasibility studies, engineering design, commissioning and performance trial periods.
- Evaluation of processing alternatives via technical/economic models.
- Metallurgical testwork program development and management or review.
- Flowsheet development/analysis and equipment selection review.
- Process control system strategy development and configuration management.

Whilst technical and economic aspects of mineral processing within the gold sector represents our forte, other minerals industries including lateritic nickel, base metals and mineral sands form an important component of our client base.

Macromet was formed by Gary and Soosie Jobson in 1997 and the founders remain the principal consultants of the company. Macromet also retains contact with industry qualified personnel for additional contract work and can provide resumes for suitable personnel upon request.

SCOPE OF SERVICES

Macromet offer the following key services:

TECHNICAL REVIEWS

Provision of quality reports pertaining to technical reviews of almost any aspect of mineral processing, including:

- Technical investigative audit reports containing a detailed description of improvable performance areas, alternative solutions and recommended actions.
- Development of Options Studies (in conjunction with the technical/economic modelling described below) to define the significant economic variables based upon technical relationships determined from laboratory/plant data.
- Evaluation of circuits, unit processes and equipment items regarding operational, production, maintenance and operating costs aspects.

OPERATIONAL TROUBLESHOOTING/DE-BOTTLENECKING

Hands-on investigation of unit processes to establish root causes for unacceptable performance; development of remedial options; selection of most cost-effective solution; management of the implementation of the modification (managerial, operational, maintenance or engineering); commissioning and performance trial management. Operator/supervisory staff training represents an additional benefit, and all site work is undertaken with a view to pass on as much information as possible.

CLIENT REPRESENTATION

Client representation for feasibility studies, engineering design, commissioning, and performance trial periods. Macromet's operational experience greatly assists with the development, engineering, commissioning and operational project periods to implement longer term considerations within a project design.

TECHNICAL/ECONOMIC MODELS

Spreadsheet based models incorporating technical relationships and economic projections designed to examine project sensitivities to significant operational variables. Technical relationships are generally developed from regression of laboratory, plant trial or historical data to allow assessment over a wide range of scenarios. Cost projections are completed from baseline assumptions and converted to 'fixed:variable' ratios to allow estimation of economy of scale considerations. Economic parameters are agreed with the client and relevant summarised financial data presented, generally to cash operating profit level. Studies completed include:

- Life of mine optimisation models for resource to reserve conversions.
- Plant target direction recommendations.
- Upgrade processing route comparison studies/recommendations.

The models allow for accurate comparisons of project/process improvements on an economic and technical basis. The spreadsheets are constructed in a manner to allow revision by the client at a later stage and thus represent a tool for continued project optimisation.

METALLURGICAL TESTWORK PROGRAMS

Metallurgical testwork program design, initiation, management, analysis and reporting represent an important component within any project development. Macromet produce testwork designs/requests for quotations which are designed to allow generation of relationships defining the effect of significant processing variables, generally by three point testing. Aspects include sample selection, sampling, testwork flowsheet design, preparation of requests for quotation documents, sample preparation advice, testwork supervision/management, data analysis and full reporting.

PROCESS CONTROL SYSTEM EVOLUTION

Development of process control strategies and assistance in process control system configuration and system commissioning. Instrumentation proposal evaluations, P&ID design review, data collection system proposals evaluation and security advice have also been undertaken for various unit processes and plants.